

# Year 9

## Numeracy Homework

Name:

Teacher:



### Instructions

- You should spend 20mins for 10 days practicing for your Numeracy tests.
- Your parents/ guardians have been given an answer sheet so that they can check your work.
- Colour the boxes red or green depending on whether you got the question right or wrong.
- Use the self-assessment to focus on the things you find difficult to do, use MyMaths or help from someone at home to develop your understanding of these skills.

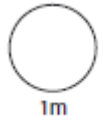
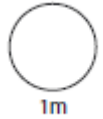
Day		1	2	3	4	5	6	7	8	9	10
1	Add and subtract numbers of any size										
2	Volume/Averages (alternating)										
3	Speed, distance, time										
4	Use BODMAS										
5	Equivalent F, D, P										
6	Multiply and divide decimals										
7	Standard form										
8	Understand the importance of powers of 10										
9	Find areas of shapes including circles										
10	Multiply and divide whole numbers										
11	Express one quantity as a percentage of another										
12	Use ratio and proportion to calculate quantities										
13	Estimation										
14	Use mixed numbers and improper fractions										
15	Convert between temperature scales										
16	Calculate a percentage increase or decrease										
17	Apply understanding of bearings										
18	Calculate using foreign money and exchange rates										
19	Saving and investing										
20	Work out the circumference of a circle										
List 3 things you struggled with over days 1-5 :		List 3 things you struggled with over days 6-10:									
1.		1.									
2.		2.									
3.		3.									

# DAY 1

1

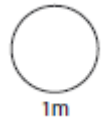
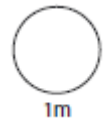
$$173 + \boxed{\phantom{000}} = 3200$$

$$\boxed{\phantom{000}} - 23.4 = 52.7$$



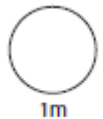
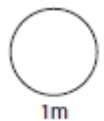
2

Work out the volume of a cube which has a length of 2cm.



3

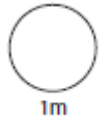
It takes Jack 1 hour and 30 minutes to drive 93 miles.  
What was his average speed?



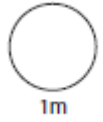
Miles per hour

**4**

$3^2 + 3^3 =$



$(3 + 4)^2 - 18 \div 6 =$

**5**

Enter either =, < or > in the boxes below.

60%

0.06

0.12

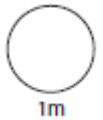
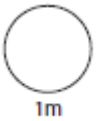
12/10

 $\frac{3}{4}$ 

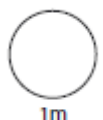
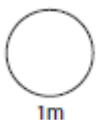
70%

3%

3/100

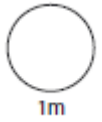
**6**

Work out  $21.4 \times 0.2$

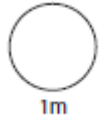


7

Write  $6.78 \times 10^3$  as a normal number

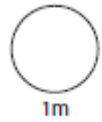


b) Write 458000 in standard form



8

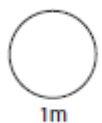
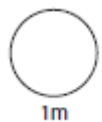
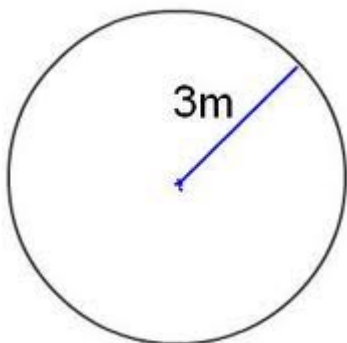
$$10^4 \times 10^6 =$$



9

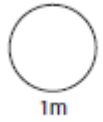
Use  $\pi = 3.14$

Work out the area of the circle.



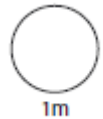
10

Work out  $1512 \div 36$



11

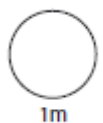
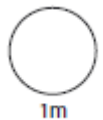
In 7D there are 30 pupils. 18 are girls. What percentage are girls?



12

£1.24 for 250grams

How much for 3.75kg?

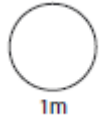
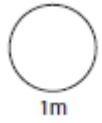


13

Estimate the value of

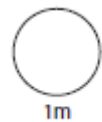
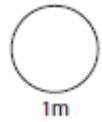
$$\underline{89.6 + 28.97}$$

$$5.061 \times 7.99$$



14

Work out  $3\frac{3}{4} + 7\frac{1}{2}$

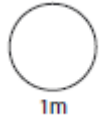
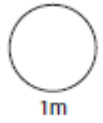


15  $F = C \times \frac{9}{5} + 32$

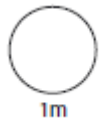
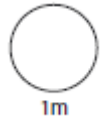
The above formula shows how to convert degrees Fahrenheit to Celsius

a) Convert 45°C to Fahrenheit

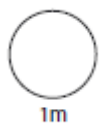
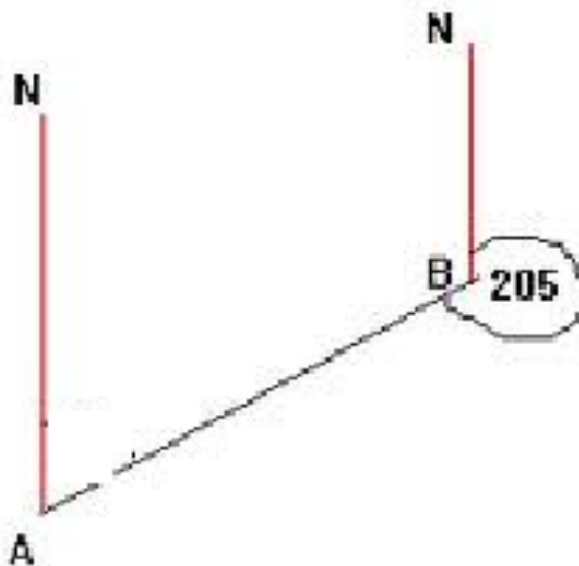
b) Convert 68° F to Celsius



16 Increase £240 by 12%.



17 Calculate the bearing of B from A?

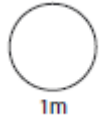
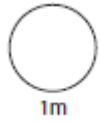


18

Exchange rate. Pounds Sterling to US Dollar

£1 = \$1.17

Frank changes £420 . How much does he receive in dollars?

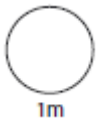
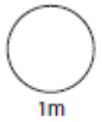


19

Dev and Ann both invest £500. How much more money does Anna have at the end of 1 year?

**Dev**  
£500  
**decreased** by  
5%

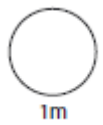
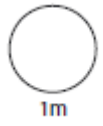
**Anna**  
£500  
**increased** by  
15%





Use  $\pi = 3.14$ 

Joe wants to tie a ribbon around a Christmas candle. The bow will be 6.6cm long. The radius of the candle is 2cm. How much ribbon does Joe need?

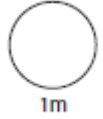
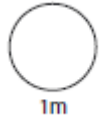


# DAY 2

1

$$277 + \boxed{\phantom{000}} = 4500$$

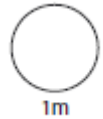
$$\boxed{\phantom{000}} - 17.1 = 47.6$$



2

The mean average of three numbers is 8. Two of the numbers are 11 and 7.

What is the third number?

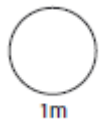
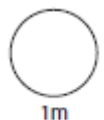


3

It takes Dewi 45 minutes to drive 42 miles. What was his average speed?

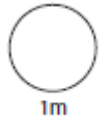


Miles per hour

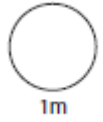


4

$5^2 + 5^3 =$



$(6 + 4)^2 - 5 \times 2^2 =$



5

Enter either =, < or > in the boxes below.

16%

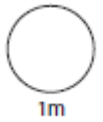
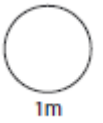
0.16

0.1

1%

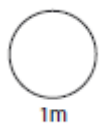
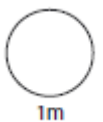
1/4

14%



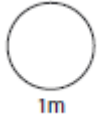
6

Work out  $32.4 \times 0.2$

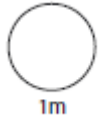


7

a) Write  $5.8 \times 10^3$  as a normal number

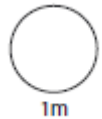


b) Write 0.0876 in standard form



8

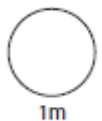
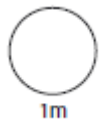
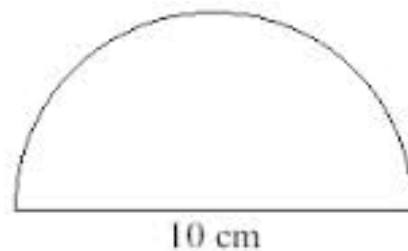
$$10^6 \div 10^3$$



9

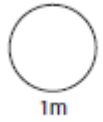
Use  $\pi = 3.14$

Work out the area of the semi-circle.



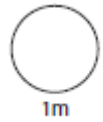
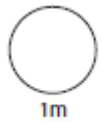
10

Work out  $1512 \div 36$



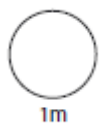
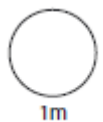
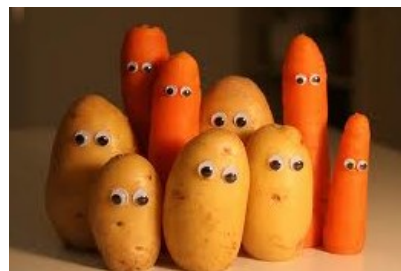
11

In 7D there are 45 pupils. 18 are girls. What percentage are girls?



12

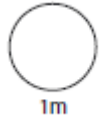
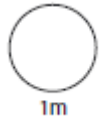
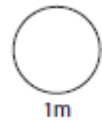
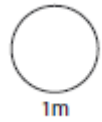
The total cost of 5kg of potatoes and 2kg of carrots is £3.88. 3kg of potatoes cost £1.98. Work out the cost of 1kg of carrots.



**13**

Estimate the value of

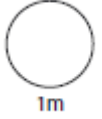
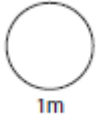
$$\frac{(4.3)^2 \times 21}{22.5 \times 3.8}$$

**14**Work out  $3\frac{3}{4} - 7\frac{1}{2}$ 

15

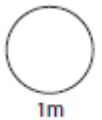
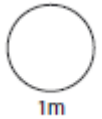
$$F = 1.8C + 32$$

Water boils at  $100^\circ$  Celsius. What temperature is that in Fahrenheit?



16

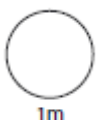
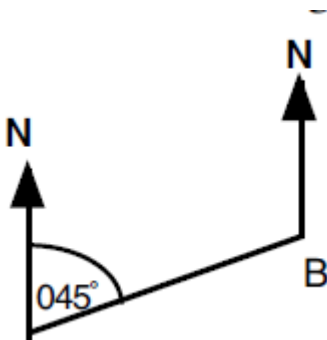
Increase £120 by 17.5%.



17

Calculate the bearing of A from B.

(Diagram not to scale)

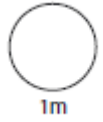
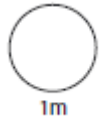


18

Exchange rate. Pounds Sterling to US Dollar

£1 = \$1.52

Frank changes £120. How much does he receive in dollars?



19

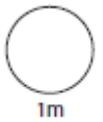
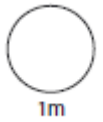
Bert and Ernie both invest £1000 in a business for one year.



Bert makes a 3.5% loss.

Ernie makes a 11% gain.

How much more money did Ernie have at the end of the year?



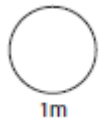
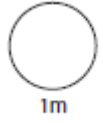


20

A plate has a radius of 15cm. Find the circumference of the plate.



Use  $\pi = 3.14$

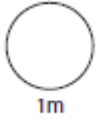
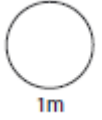


# Day 3

1

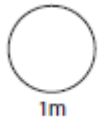
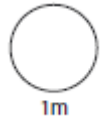
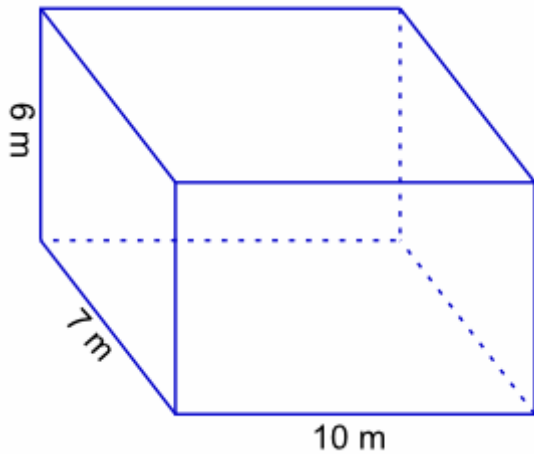
$$413 + \boxed{\phantom{0000}} = 8700$$

$$\boxed{\phantom{0000}} - 43.2 = 78.89$$



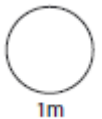
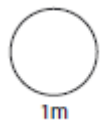
2

Calculate the volume of the cuboid.



3

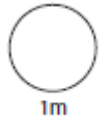
It takes Delyth 1hr and 15mins to drive 80 miles.  
What was her average speed?



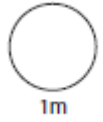
Miles per hour

4

$7^2 + 4^3 =$



$(5 \times 4)^2 \div 2^3 =$



5

Enter either =, < or > in the boxes below.

6%

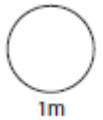
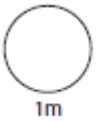
3/50

0.002

2%

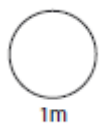
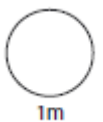
17%

17/50



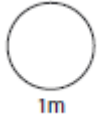
6

Work out  $17.8 \times 0.3$

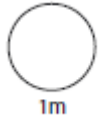


7

a) Write  $1.2 \times 10^7$  as a normal number

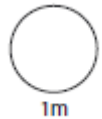


b) Write 754 200 in standard form



8

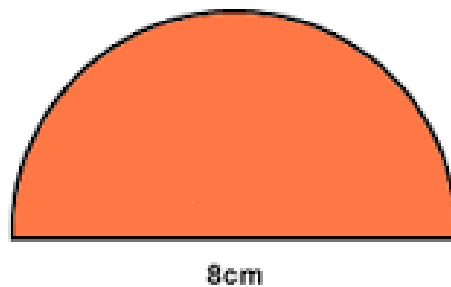
$$5^6 \div 5^{-3} =$$



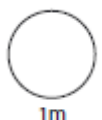
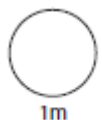
9

Use  $\pi = 3.14$

Work out the area of the semi-circle.

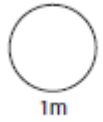


8cm



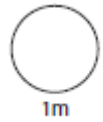
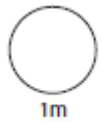
10

Work out  $3132 \div 36$



11

In a box of 500 eggs 32 were broken. What percentage of eggs were broken ?



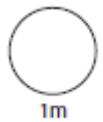
12

A model farm is made using a scale of 1 : 24.



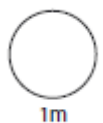
a). The height of a model cow is 5 cm. What is the height of the real cow ?

b). A real horse is 168 cm long. How long is the model horse ?



a)

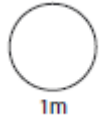
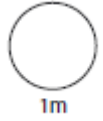
b)



13

Estimate the value of

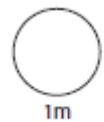
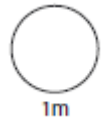
$$(5.6^2 - 2.7^2) \times 3.12$$



14

Work out

$$2\frac{1}{6} + 4\frac{2}{3}$$

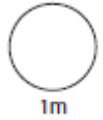
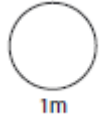


15

$$F = 1.8C + 32$$

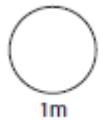
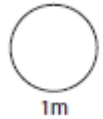
The above formula shows how to convert degrees Celsius to Fahrenheit

a) Convert 20°C to Fahrenheit



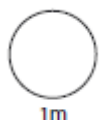
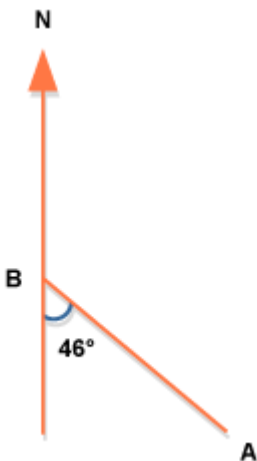
16

Increase £48 by 11%.



17

Calculate the bearing of A from B.



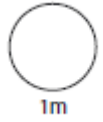
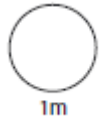
18

Exchange rate.

Bobby goes to Japan, where he gets 215 yen for each one pound.

a). Bobby changes £ 1035. Calculate how many yen he receives.

b). Bobby hires a car costing 53 750 yen. Calculate the price in pounds.



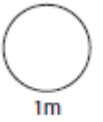
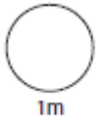
19

Alex went to Italy, 20 years ago where she got 3100 lira for each one pound.



a). Alex changed £ 47. Calculate how many lira she received.

b). Alex saw a picture costing 139500 lira. Calculate the price in pounds

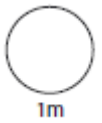
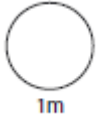
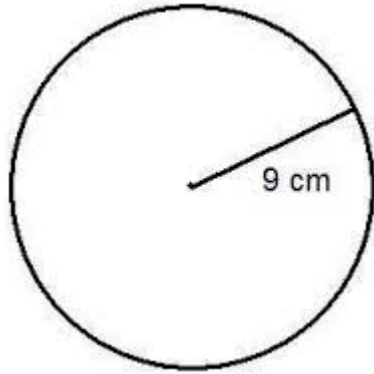




20

Calculate the circumference of the circle below.

Use  $\pi = 3.14$

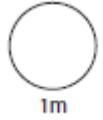
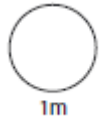


# DAY 4

1

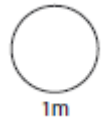
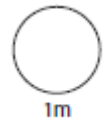
$$674 + \boxed{\phantom{000}} = 976$$

$$\boxed{\phantom{000}} - 65.4 = 1.07$$



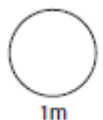
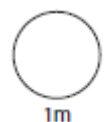
2

The temperature in degrees Celsius over 4 days in July was 21, 21, 19 and 19. What was the mean temperature?

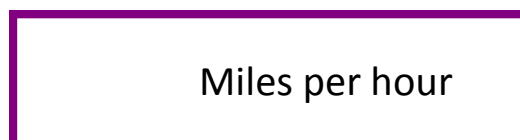


3

It takes Luke 1hr and 45mins to run 14 miles. What is his average speed?

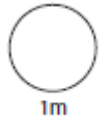


Miles per hour

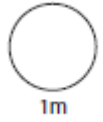


4

$13^2 + \sqrt{4} =$



$(1.4 \times 2) + 3^2 =$



5

Enter either =, < or > in the boxes below.

7%

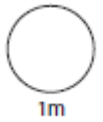
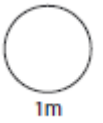
7/10

0.5%

5/1000

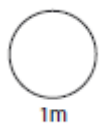
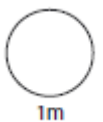
12%

3/25



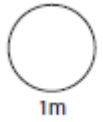
6

Work out  $34.78 \times 0.2$

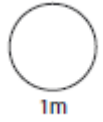


7

a) Write  $4.2 \times 10^6$  as a normal number

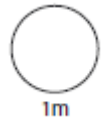


b) Write 0.007 52 in standard form



8

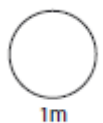
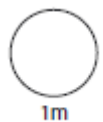
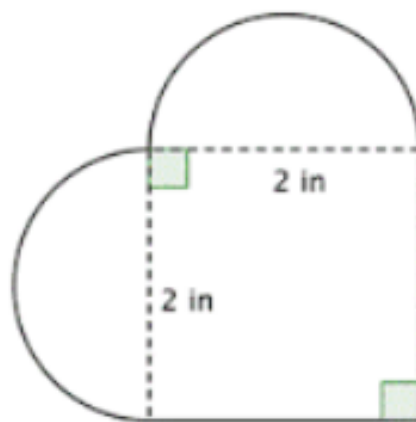
$$4^8 \div 4^3$$



9

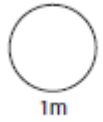
Use  $\pi = 3.14$

Work out the area the shape below.



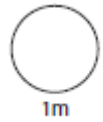
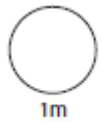
10

Work out  $1445 \div 17$



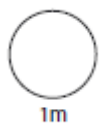
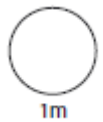
11

The captain of a football team scored 17 out of the 85 goals they scored that season. What percentage of the goals did he score ?



12

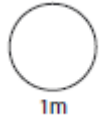
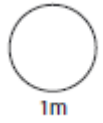
Pocket money is split between Pete, Alan and Helen in the ratio 4 : 5 : 6. Dad pays out £60, how much does each person get ?



13

Estimate the value of

$$\begin{array}{r} 228 + 417 \\ \hline 380 - 123 \end{array}$$

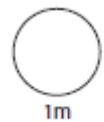
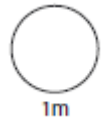


14

Work out



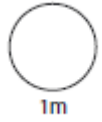
$$3\frac{3}{4} - 1\frac{7}{8}$$



15

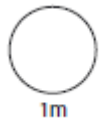
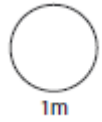
$$F = 1.8C + 32$$

Using the formula above answer the following question: Which is warmer 40°C or 100°F?



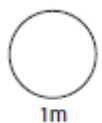
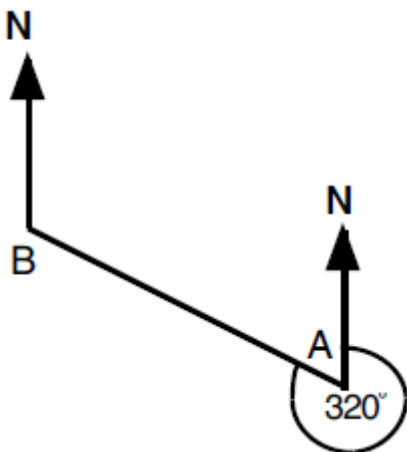
16

Increase 67 by 2%.



17

Calculate the bearing of A from B.  
(Diagram not to scale)

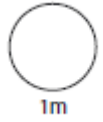
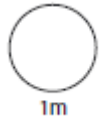


18

Exchange rate. Pounds Sterling to US Dollar

£1 = \$1.17

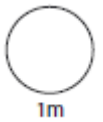
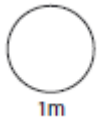
Frank changes £420 . How much does he receive in dollars?



19



Donald and Alan both invest £1 million pounds. Donald's investment increases by 17%, Alan makes an 8% loss. How much more money does Donald have?



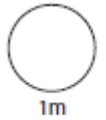
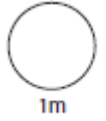


20

The London Eye has a diameter of approximately 120m. What is its circumference?



Use  $\pi = 3.14$

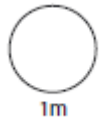
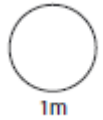


# DAY 5

1

$$345 + \boxed{\phantom{0000}} = 6754$$

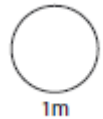
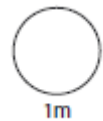
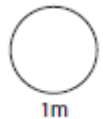
$$\boxed{\phantom{0000}} - 12.05 = 23.7$$



2

Write 0.125 as a fraction

Write 0.09 as a percentage

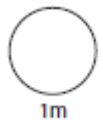
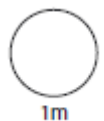


3

It takes Sandra 12mins to drive a bus 5.5 miles.  
What is her average speed?

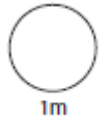


Miles per hour

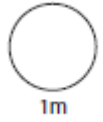


4

$$\sqrt{7+9} + 6 \times 5 =$$

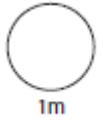
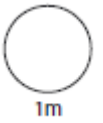


$$(8+5)^2 =$$



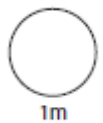
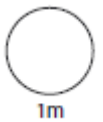
5

Beth and John share a chocolate bar. Beth takes 25% and John takes 0.3 of the bar. What percentage of the bar is left?



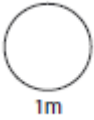
6

Work out  $1.7^2$



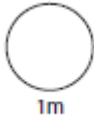
7

270 000 000 Polos are created each year. Write this number in standard form.



8

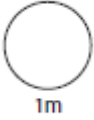
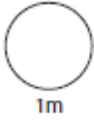
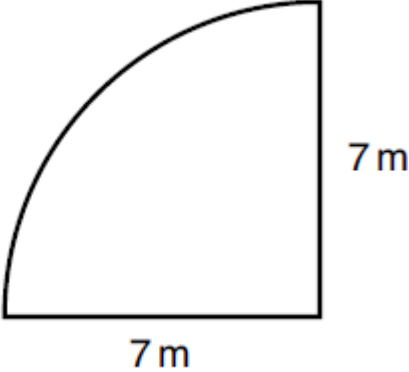
$$10^{19} \times 10^5 =$$



9

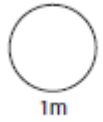
Use  $\pi = 3.14$

Work out the area of the shape below



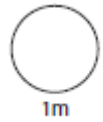
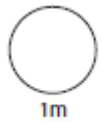
10

Work out  $1632 \div 16$



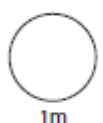
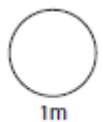
11

One day 132 trains arrive at a railway station and 99 are on time. What percentage of them are late ?



12

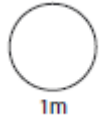
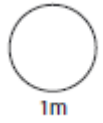
A sum of money is divided between three women A, B, and C in the ratio 2 : 3 : 5. If B receives £2.40 less than C, how much does each receive ?



**13**

Estimate the value of

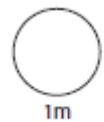
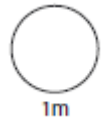
$$\frac{708 - 43.8}{4.3^2 + 3.9}$$

**14**

Work out



$$3\frac{3}{5} + 4\frac{7}{10}$$

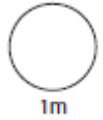
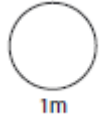


15

$$F = 1.8C + 32$$

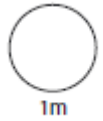
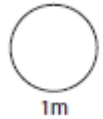
The above formula shows how to convert degrees Celsius to Fahrenheit

a) Convert 68° F to Celsius



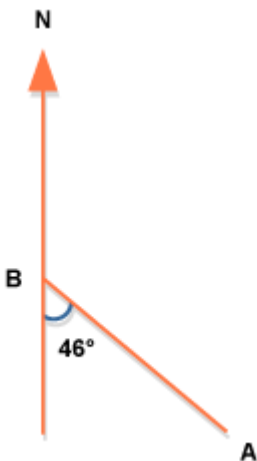
16

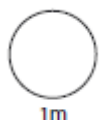
Increase £48 by 11%.



17

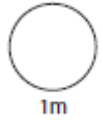
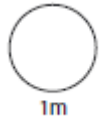
Calculate the bearing of A from B.





18

Patrick is travelling to Ireland. He changes £600 and receives €906. What is the exchange rate?

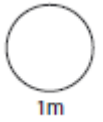
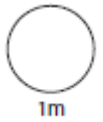


£1 : €

19



David earned a salary last year of £45 000 he saved two fifths of his salary. He made 7% interest on this savings. What were his savings worth after one year?



[Empty box for answer]

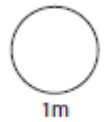
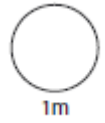


20

A Ferris wheel has a radius of 7.5m. What is its circumference?



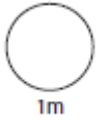
Use  $\pi = 3.14$



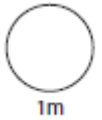
# DAY 6

1

$$1167 + \boxed{\phantom{000}} = 4500$$

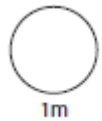
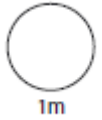


$$17.56 + \boxed{\phantom{000}} = 52.7$$



2

The dimensions of an Olympic-sized swimming pool are 50 m long, 25 m wide, and the water is 2 m deep. What is the volume of water?

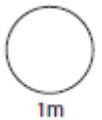
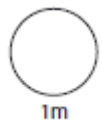


3

It takes Lewis 5 minutes to drive 4.5 miles. What is his average speed?

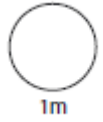


Miles per hour



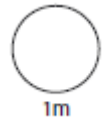
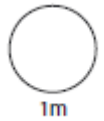
4

$$7 + (6 \times 5^2 + 3) =$$



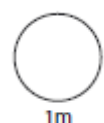
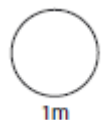
5

Jack and Jill have the same starting salary. They both receive a pay increase. Jack receives an increase of 12%, Jill's income increases by  $\frac{7}{50}$ . Who earned the most money?



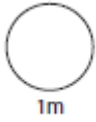
6

Work out  $1.7^2$



7

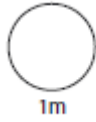
The lid of a pack of Smarties weighs 0.0005kg.  
Write this number in standard form.



1m

8

$$10^{20} \times 10^5 =$$

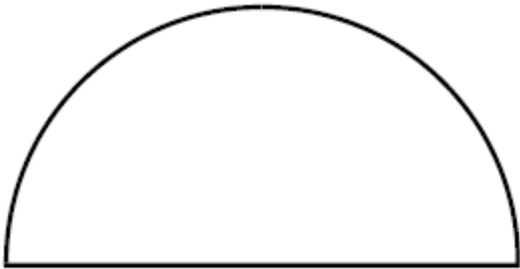


1m

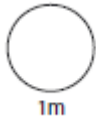
9

Use  $\pi = 3.14$

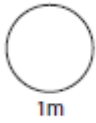
Work out the area of the shape below



24 cm



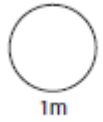
1m



1m

10

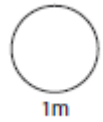
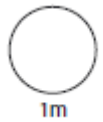
Work out  $3375 \div 45$



11

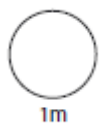
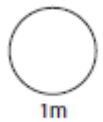
On a Friday night 48 pupils were in detention from a school of 800 pupils.

What percentage of the school were in detention that Friday night ?



12

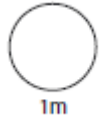
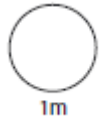
The number of pages in a magazine was increased from 48 to 80. If the price, which was 75p, is increased in the same ratio, what will the new price be ?



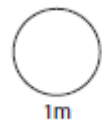
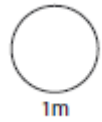
13

Estimate the value of

$$(2.1^3 + 6.8^2) \times 2.1$$



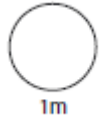
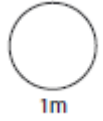
14

Subtract  $1\frac{9}{10}$  from  $4\frac{3}{5}$ 

15

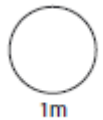
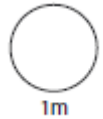
The text below shows how we can convert °Fahrenheit to °Celsius. Using that information show how we could

°F to °C	Deduct 32, then multiply by 5, then divide by 9
°C to °F	?



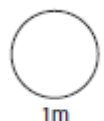
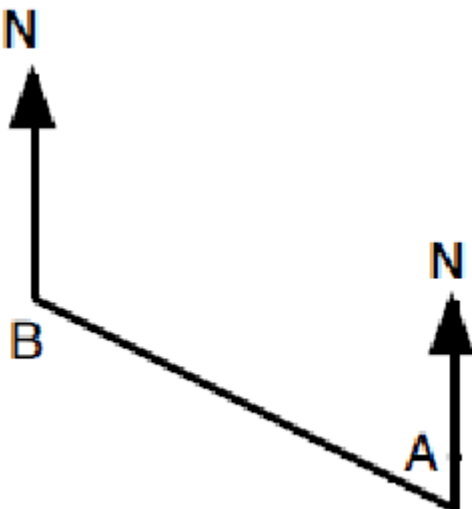
16

Which is bigger a 12% increase on £420 or a 15% decrease on £500?



17

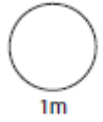
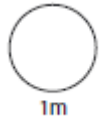
Measure the bearing of B from A.



18

Holly is going on holiday to New York. She changed £500 and received \$750. What is the exchange rate?

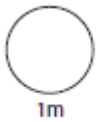
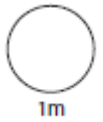
£1: \$



19



Caitlin received a salary last year of £25 000. She saved one fifth of this. She made 2% interest on these savings. What were her savings worth after one year?





20

A bicycle wheel has a diameter of 12.5 inches. What is the circumference of this wheel?



Use  $\pi = 3.14$

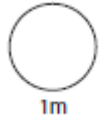
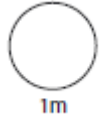


# DAY 7

1

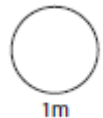
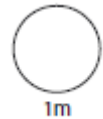
$$249 + \boxed{\phantom{0000}} = 5673$$

$$\boxed{\phantom{0000}} - 32.13 = 68.3$$



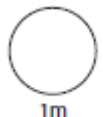
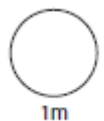
2

The cost of five cakes is 28p, 19p, 45p, 45p, 15p. What is the median cost?



3

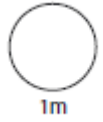
It takes Sebastian 6mins to drive 6.8 miles. What is his average speed?



Miles per hour

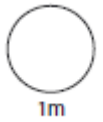
4

$$2 \times 2^3 \times (2 \times 3) =$$



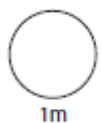
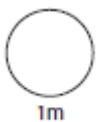
5

Which is bigger 0.8 or  $\frac{21}{25}$ ?



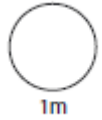
6

Work out  $13.5^2$



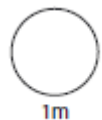
7

A factory can produce 3 700 000 KitKats in one day.  
Write this number in standard form.



8

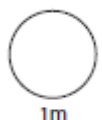
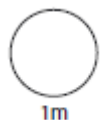
$$2 \times 10^2 \times 6 \times 10^3$$



9

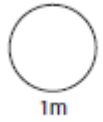
Use  $\pi = 3.14$

The minute hand on a circular clock is 5cm long. Over what area does this hand travel in 1 hour??



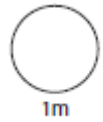
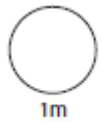
10

Work out  $2392 \div 26$



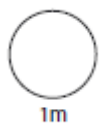
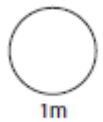
11

A farmer has 120 sheep and 180 cows. What percentage of these animals are cows ?



12

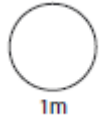
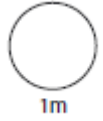
The ages of a mother and daughter are in the ratio 8 : 3. If the mother is 48 years old, how old is the daughter?



13

Estimate the value of

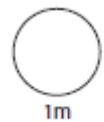
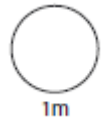
$$\begin{array}{r} 109 + 376 \\ \hline 48 \end{array}$$



14

Work out

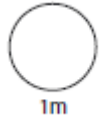
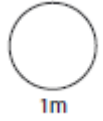
$$4 \frac{7}{8} + 11 \frac{5}{7}$$



15

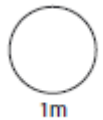
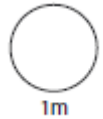
$$F = 1.8C + 32$$

In 2014 Britain's winter temperatures hit lows of  $-15^{\circ}\text{C}$ , convert this temperature to Fahrenheit.



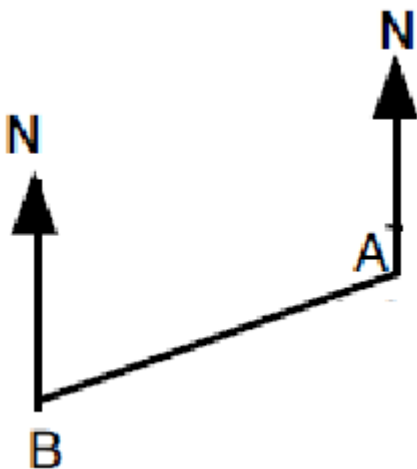
16

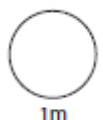
Which is bigger, a 17% increase on £234 or a 15% decrease on 260?



17

Measure the bearing of B from A.



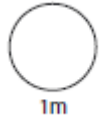
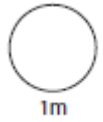


18

Jenny went to France 25 years ago, where she got 13 francs for each one pound.

a). Jenny changed £286. Calculate how many francs she received.

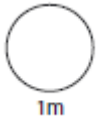
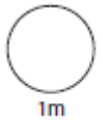
b). Jenny saw a handbag costing 312 francs. Calculate the price in pounds.



19



Tomos received an annual salary last year of £18 000. He saved one third of his salary in an account that has an interest rate of 1.5%. What is the value of his savings after one year?



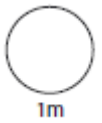
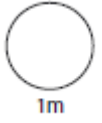


20

What is the circumference of a Domino's pizza that has a diameter of 30cm?



Use  $\pi = 3.14$

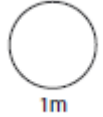
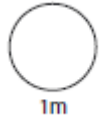


# DAY 8

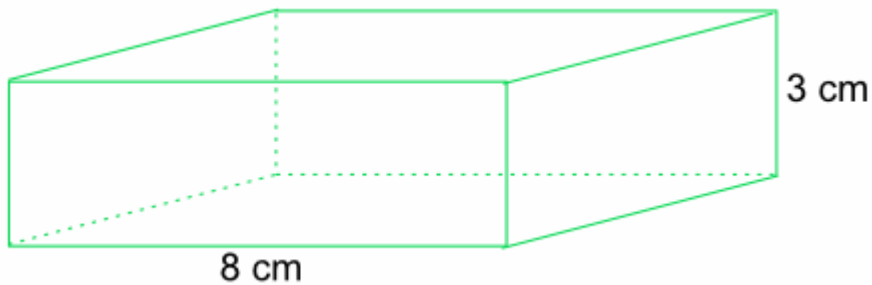
1

$$321 + \boxed{\phantom{000}} = 450$$

$$\boxed{\phantom{000}} - 87.6 = 123.07$$

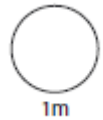
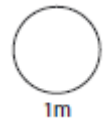


2



The length of a cuboid is 8cm, its height is 3cm.

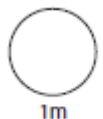
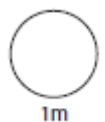
If its volume is  $120\text{cm}^3$  what is its width?



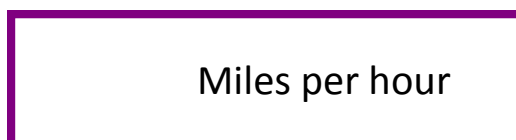
3

It took Amelia 1hr and 20mins to fly 440 miles.

What was her average speed?



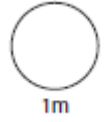
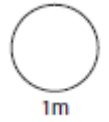
Miles per hour



4

Work out

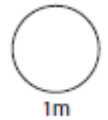
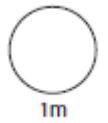
$$\frac{2^4 + (16 - 3 \times 4)}{(6 + 3^2) \div (7 - 4)}$$



5

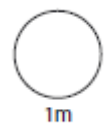
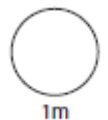
Put these numbers in ascending order.

0.7      15/50      34%      1/7



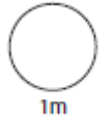
6

Work out  $5256.8 \div 4$



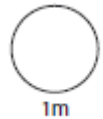
7

Write  $5.678 \times 10^9$  as a normal number.



8

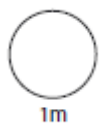
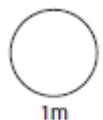
$$4 \times 10^2 \times 9 \times 10^3$$



9

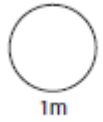
Use  $\pi = 3.14$

A circular field has a diameter of 12m. What is the area of this field?



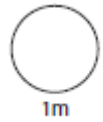
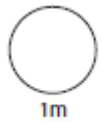
10

Work out  $1456 \div 26$



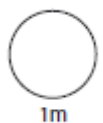
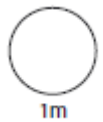
11

A farmer has 350 birds, of which 140 are ducks. What percentage of ducks does he have ?



12

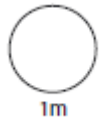
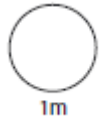
Divide £5 between three friends in the ratio 2 : 3 : 5.



13

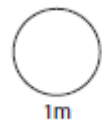
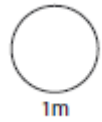
Estimate the value of

$$(77 - 18) \times 3.2$$



14

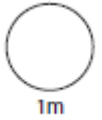
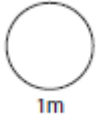
What is  $2\frac{1}{2} + 1\frac{1}{6} - 1\frac{2}{3}$  ?



15

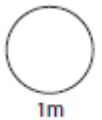
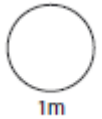
$$F = 1.8C + 32$$

Using the above formula convert  $60^{\circ}\text{C}$  to Fahrenheit.



16

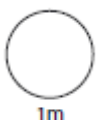
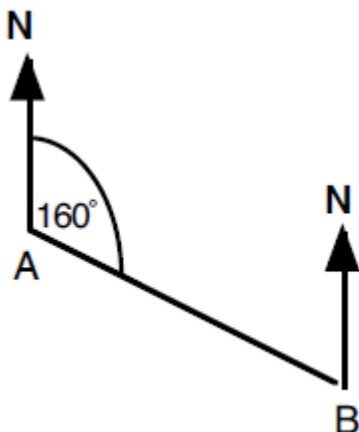
Decrease 88 by 35%.



17

Calculate the bearing of A from B.

(Diagram not to scale)

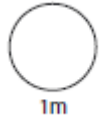
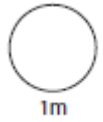


18

Billy went to Portugal in 1991. He got 310 escudos for each one pound.

a). Billy changed £ 74. Calculate how many escudos he received.

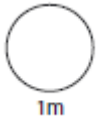
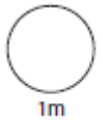
b). Billy hired a car costing 7750 escudos. Calculate the price in pounds



19



George invests £400 at an interest rate of 4.7%. Calculate how much money he will have after 1 year.



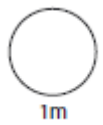
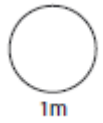


20

A farmer has a circular field which is 100 metres across. He wishes to put a fence around the field. What length of fencing does he require ?



Use  $\pi = 3.14$

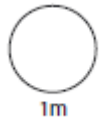
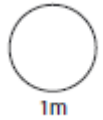


# DAY 9

1

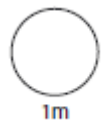
$$193 + \boxed{\phantom{000}} = 3450$$

$$\boxed{\phantom{000}} - 19.8 = 3.06$$



2

What is the median of these numbers: 10, 3, 6, 10, 4, 8?

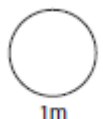
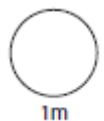


3

It takes Tony 15mins to travel 4.5 miles on his skate board. What is his average speed?



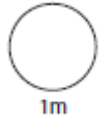
Miles per hour



**4**

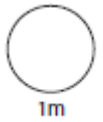
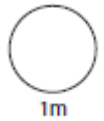
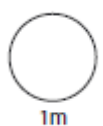
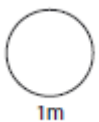
Work out

$$(15 \div 3 + 4) - (3^2 - 7 \times 2)$$

**5**

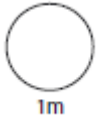
Put these numbers in ascending order.

32%    9/25    0.34    1/4

**6**Work out  $47.1 \div 6$ 

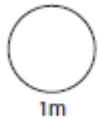
7

Write  $4.5 \times 10^{-7}$  as a normal number.



8

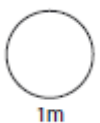
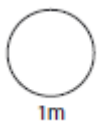
$$4 \times 10^5 \times 8 \times 10^3$$



9

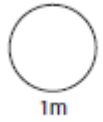
Use  $\pi = 3.14$

A frisbee has a circumference of 31.4cm, what is it's area?



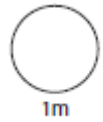
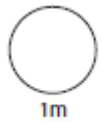
10

Work out  $4671 \div 81$



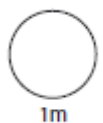
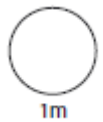
11

In a school of 900 pupils, 270 support Manchester United. What percentage support Manchester United?



12

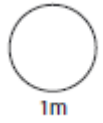
A school collected £180 for charity. It was decided to divide the money between Barnados and the RSPCA in the ratio 2 : 3. How much did each charity receive?



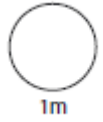
13

Estimate the value of

$$2.6 \times 4.1 - 3.2^2$$



1m

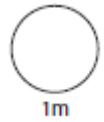


1m

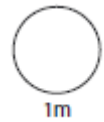
14



What is  $4\frac{3}{4} - 1\frac{1}{12} - 2\frac{5}{6}$  ?



1m

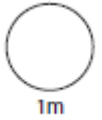
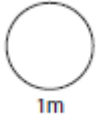


1m

15

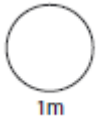
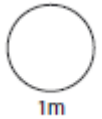
$$F = 1.8C + 32$$

Using the formula above answer the following question: Which is warmer 30°C or 68°F?



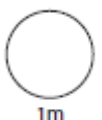
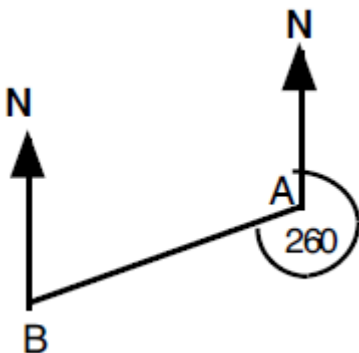

16

Increase £57.50 by 15%.




17

Calculate the bearing of A from B.  
(Diagram not to scale)

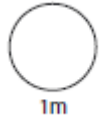
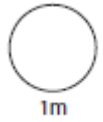


18

Barney goes to Hong Kong, where he gets 14 Hong Kong dollars for each one pound.

a). Barney changes £ 260. Calculate how many Hong Kong dollars he receives.

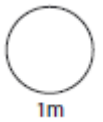
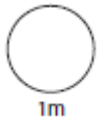
b). Barney has a suit made costing 1008 Hong Kong dollars. Calculate the price in pounds.



19



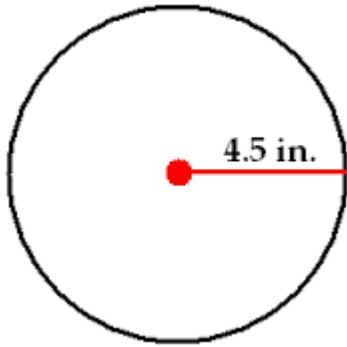
Ria invests £8000 in a bank account which makes 3.5% interest in year 1. In year 2 the interest rate increases to 5%. How much money will Ria have at the end of year 2?



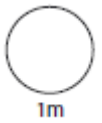


20

Calculate the circumference of the circle.



Use  $\pi = 3.14$

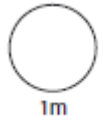
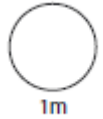


# DAY 10

1

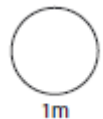
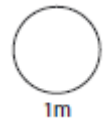
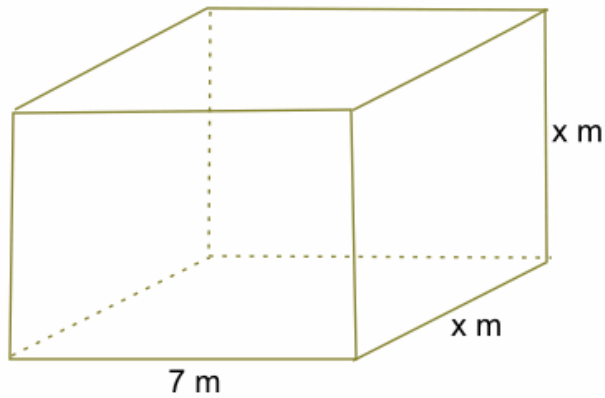
$$987.5 + \boxed{\phantom{000}} = 1700$$

$$\boxed{\phantom{000}} - 23.4 = 52.7$$



2

The volume of the water tank is  $252\text{m}^3$ , what is its width?

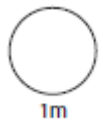
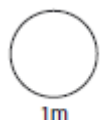


3

It takes Bradley 2hrs and 15mins to cycle 81km. What is his average speed?



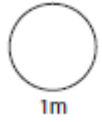
Km per hour



**4**

Work out

$$(7 - \sqrt{9}) \times (4^2 - 3 + 1)$$

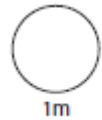
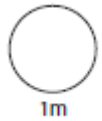
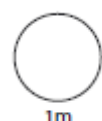
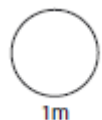
**5**

Put these numbers in descending order.

The reciprocal of 2

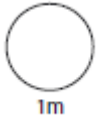
0.18

56%

 $\frac{3}{10}$ **6**Work out  $32.4 \div 0.8$ 

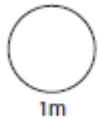
7

Write  $1.67 \times 10^{-2}$  as a normal number.



8

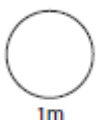
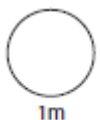
$$8 \times 10^5 \div 4 \times 10^3$$



9

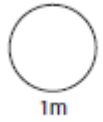
Use  $\pi = 3.14$

A circular playing field has a circumference of 628m. What is its area?



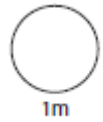
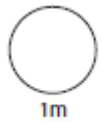
10

Work out  $975 \div 15$



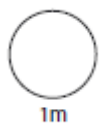
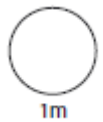
11

In a crate of apples 33 are bad. The crate holds 264 apples. What percentage are bad ?



12

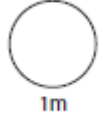
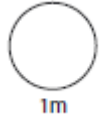
A green paint is mixed from blue and yellow paint in the ratio 3 : 5. How much of each colour is needed to make 80 litres of this green paint ?



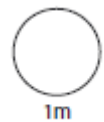
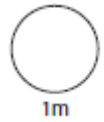
**13**

Estimate the value of

$$(3.5^2 + 9.89^3) \div 1.78$$

**14**

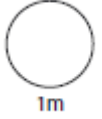
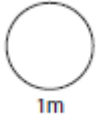
$$7\frac{1}{3} + 5\frac{3}{4}$$



15

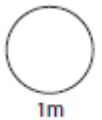
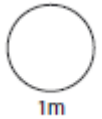
$$F = 1.8C + 32$$

Water freezes at  $0^\circ$  Celsius. What temperature is that in Fahrenheit?



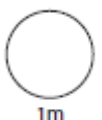
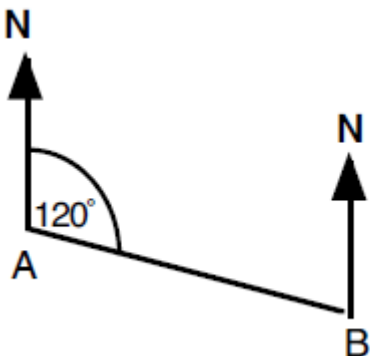
16

Increase £36 by 14%.



17

Calculate the bearing of A from B.  
(Diagram not to scale)

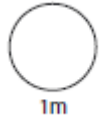
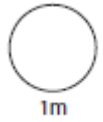


18

Alex went to Italy, 20 years ago where she got 3100 lira for each one pound.

a). Alex changed £ 47. Calculate how many lira she received.

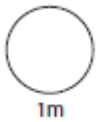
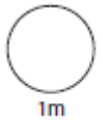
b). Alex saw a picture costing 139500 lira. Calculate the price in pounds



19



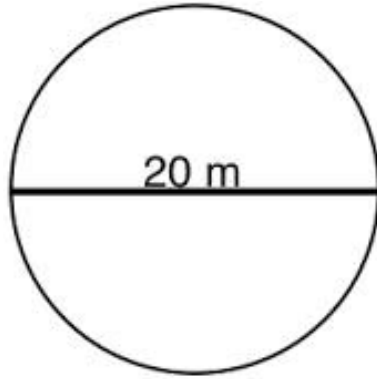
Richard invests £5000 in a bank account which makes 4% interest in year 1. In year 2 the interest rate increases to 5%. How much money will Richard have at the end of year 2?





20

Calculate the circumference of the circle.



Use  $\pi = 3.14$

