St Mary's School
CAMBRIDGE

Year 6 Maths

Sample Test

Time allowed: 45 minutes

Name: _____

INSTRUCTIONS :

- **Answer all questions**
- **Answers should be written in the spaces provided**

Year 6 KEY OBJECTIVES ASSESSED

Order a mixed set of numbers with up to three decimal places.
Reduce a fraction to its simplest form by cancelling common factors.
Use a fraction as an operator to find fractions of numbers or quantities (e.g. 5/8 of 32, 7/10 of 40, 9/100 of 400 centimetres).

Understand percentage as the number of parts in every 100, and find simple percentages of small whole-number quantities.
Solve simple problems involving ratio and proportion.

Derive quickly division facts corresponding to multiplication tables up to 10 x 10.

Carry out short multiplication and division of numbers involving decimals.

Carry out long multiplication of a three-digit by a two-digit integer.

Use a protractor to measure acute and obtuse angles to the nearest degree.

Calculate the perimeter and area of simple compound shapes that can be split into rectangles.

Read and plot co-ordinates in all four quadrants.

Identify and use the appropriate operations (including combinations of operations) to solve word problems involving numbers and quantities, and explain methods and reasoning.

Solve a problem by extracting and interpreting information presented in tables, graphs and charts

Y6 NUMBER

1. Calculate **Show your working**

a) £3.62 x 4 [1]

b) £1.36 x 7 [1]

c) 348 x 29 [2]

2. Calculate **Show your working**

a) £5.04 ÷ 6 [1]

b) 1598 ÷ 34 [2]

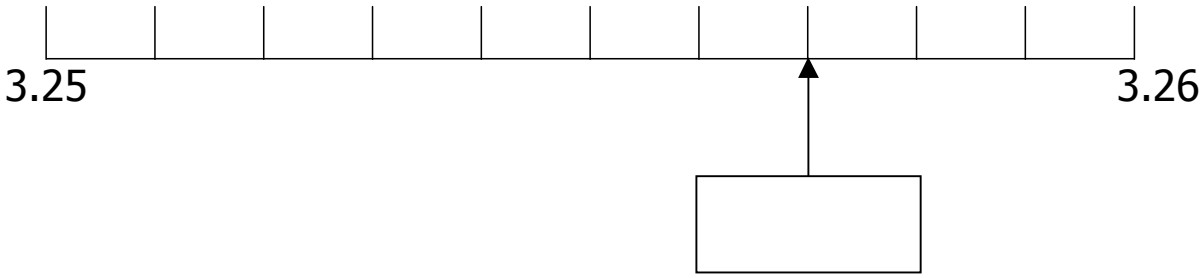
3. a) Write out these decimal numbers **in order** from the **lowest** to the **highest.**

0.03 1.1 0.217 1.07 2.206

[ ] [ ] [ ] [ ] [ ]

1

b) What number does the arrow indicate?



[ ]

1

4. Put a ring around the fraction which is equivalent to 3

$\frac{3}{8}$ $\frac{8}{3}$ $\frac{20}{3}$ $\frac{24}{8}$ $\frac{15}{8}$

1

5. Put a ring around the fraction which is equivalent to $\frac{40}{60}$

$\frac{1}{2}$ $\frac{3}{4}$ $\frac{2}{3}$ $\frac{5}{6}$ $\frac{1}{3}$

1

6. Write a fraction in the boxes to complete the sentence.

$\frac{1}{2} < \frac{\square}{\square} < \frac{2}{3}$

1

7. Write out these quantities **in order** from **lowest** to **highest**.

0.5kg 400g ¼kg 0.6kg ⅔kg

1

8. Calculate

¼ of 36 = ☐

$\frac{1}{7}$ of 28 = ☐

⅝ of 32 = ☐

$\frac{7}{10}$ of ☐ = 35

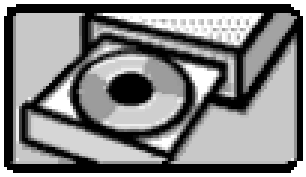
4

MONEY AND MEASURE PROBLEMS – NO CALCULATOR

9.



pen £ 2.95



CD £ 10.45



T-shirt £ 5.30

Show your working

a) How much would a pen and a T-shirt cost? ☐ 1

b) How much would three CDs cost? ☐ 1

c) How many pens could you buy for £ 20? ☐ 1

d) If you bought 3 pens and 2 T-shirts, how much change would you receive from £ 20? ☐ 1

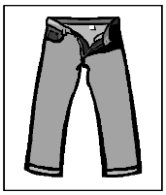
10.

PERCY'S SALE

ALL GOODS REDUCED BY 10%

Show your working

Calculate the missing prices:

a)  Was **£60** ……now down to £ ____ **1**

b)  Was £ ____ ….now down to **£6.30**. **2**

11. a) 8 bars of chocolate cost £ 2.80.
What is the cost of each chocolate bar? ____ **1**

b) 20 cans of cola cost £ 9.00.
What is the cost of each can? ____ **1**

12. 

Bob's cup contains ½ litre of water.
Jane has one quarter of the amount of water that is in Bob's cup.

a) How much water is in Jane's cup? ____ ml

b) How much water would have to be added to Jane's cup so that she had the same amount of water as Bob? ____ ml **1**

13. This chart shows temperatures recorded at noon for some world cities.

City	Temperature
Sydney	28ºC
Paris	12.5ºC
London	9ºC
Oslo	8ºC
Moscow	-8.5ºC

a) Which two cities have a difference in temperature of 21ºC? **1**

_____ and _____

b) How much warmer is Oslo than Moscow? _____ ºC **1**

HANDLING DATA

14. SCHOOL SURVEY

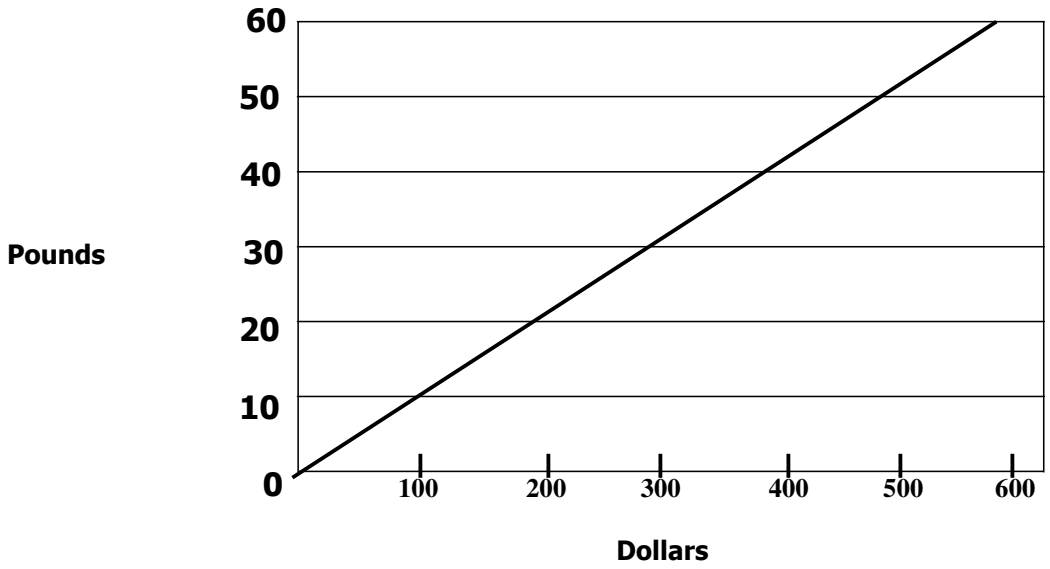
CLASS	BOYS	GIRLS	TOTAL
Reception	15	15	?
Y1	17	12	29
Y2	14	15	29
Y3	17	16	33
Y4	?	13	29
Y5	11	21	32
Y6	18	14	32
TOTAL	108	?	?

a) Complete the chart. **3**

b) One day one eighth (⅛) of Y6 were absent. How many children in Y6 were present? _____ children **1**

15. CURRENCY CHART

(currency conversion – Pounds and Hong Kong Dollars



£1 can be exchanged for 9.7 dollars

a) How many dollars could be exchanged for £50?

1

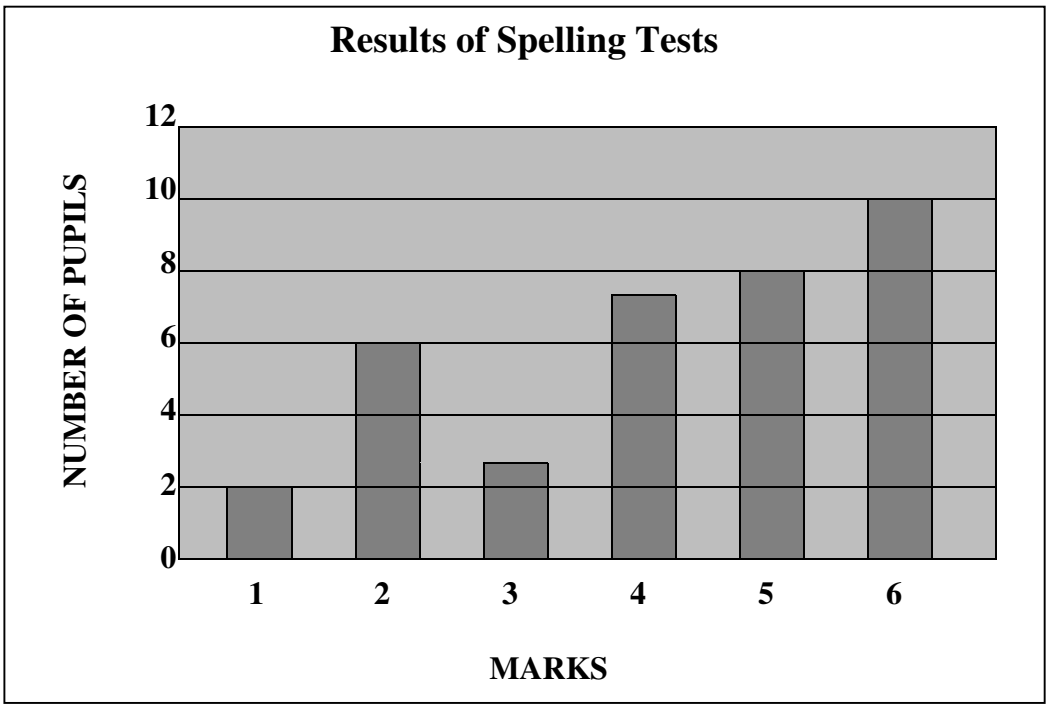
b) How many pounds could be exchanged for 291 dollars?

1

c) Look at the graph. Approximately, how many dollars could be exchanged for £17?

1

16. Y4 completed a spelling test.
The test was marked out of 10
The teacher put their results in a graph



a) How many pupils did the spelling test? ☐ 1

b) Sally said, " 25 children scored half marks or more"

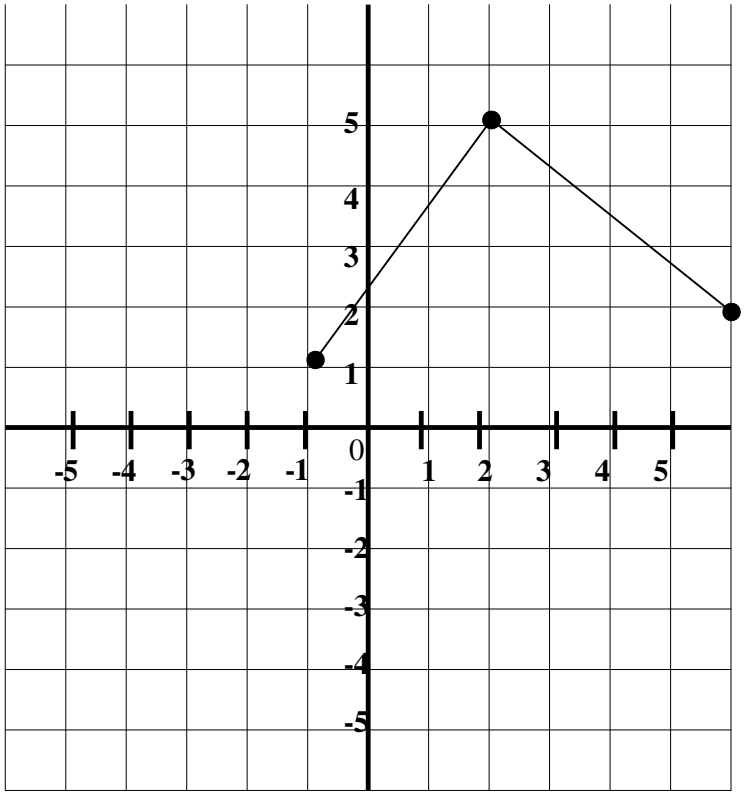
Was she correct? Yes ☐ No ☐

Explain your answer: 1

_____

_____

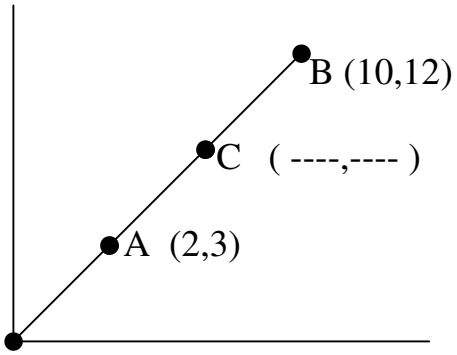
17 a) Look at the Diagram **SHAPE AND SPACE**



- The points (-1, 1), (2, 5) and (6, 2) are three of the four vertices of a square. Plot the co-ordinates on the grid.

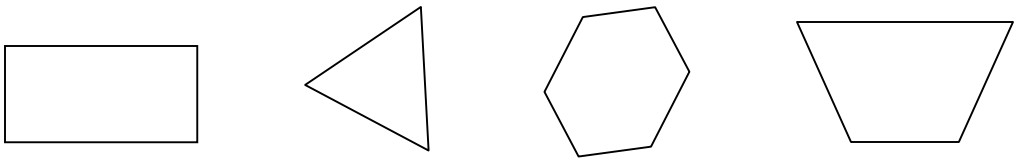
What are the co-ordinates of the fourth vertex? ☐ **1**

b) Look at the diagram

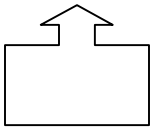


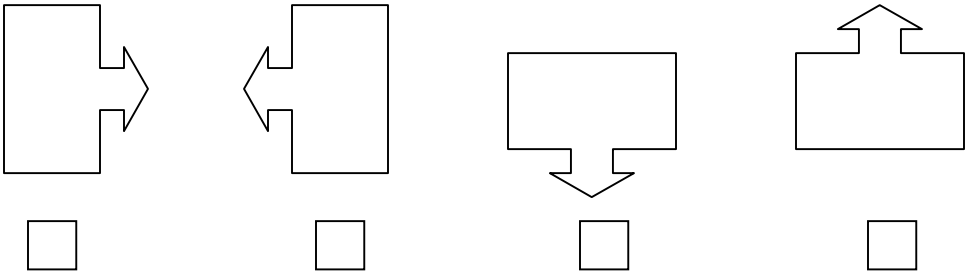
C is halfway between A and B. What are the co-ordinates of C? ☐ **2**

18. Tick the shape with only one pair of parallel sides.



1

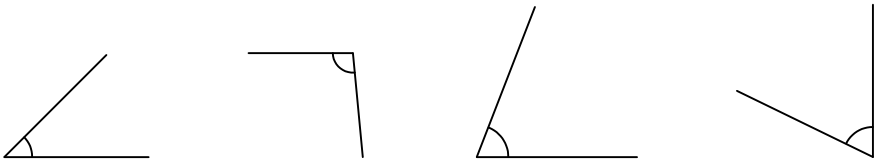
19. This Shape  is rotated through 90° anti-clockwise



Tick the shape that shows the new position.

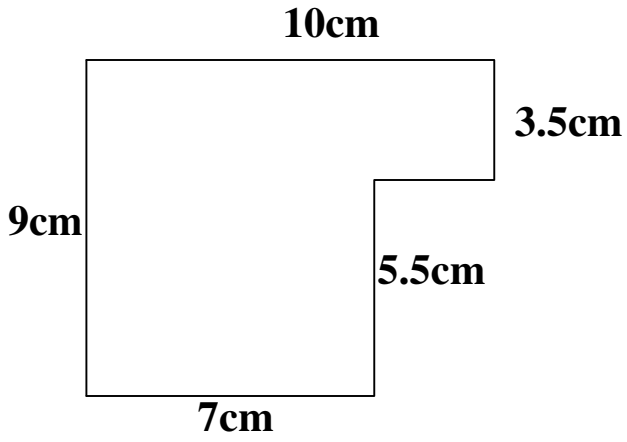
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20. Use a protractor to measure these angles.
Tick the shape with an angle of 69°



2

21.



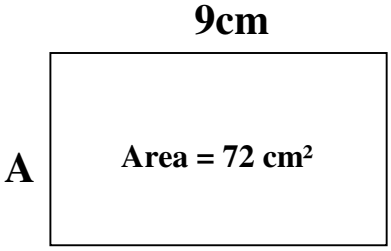
a) What is the perimeter of the shape? ____ cm

1

b) What is the area of the whole shape? ____ cm²

1

22. Look at the rectangle.



What is the length of side A? ____ cm

1

SOLVING PROBLEMS USING A CALCULATOR

23. 

a) 1276 + ☐ = 2127

b) ☐ - 370 = 237

c) 17 x ☐ = 1156

d) ☐ ÷ 13 = 154

e) 156.06 ÷ ☐ = 8.67

f) 47.23 x ☐ = 661.22

6

24. 1827 people buy tickets to watch a rugby match.
Each ticket costs £ 9.50.
What is the total amount of ticket money collected?

☐

1

25. Programmes cost £ 1.25 each. The total money from programme sales is £1096.25.
How many programmes were sold?

☐

1

26. Pencils are 16.4 cm long. How many pencils can be cut from a length 20 metres long?

☐

1

27. Train carriages hold 86 passengers. How many carriages would a train need in order to seat 1500 passengers?

1

28. Pencils weigh 7.3 g each.
What would be the mass of 580 pencils?

1

29. Small bags of flour weigh 250g.
How many bags can be made from 90kg of flour?

2

30. There are 225 children in a school. $\frac{3}{5}$ of them are girls.
How many boys are there?

1

31.

JOE'S GARAGE

Joe has to add Value Added Tax (VAT) to all bills.
20% of the bill is added to pay for VAT.

Complete the chart below to work out the total bills.

VEHICLE	COST OF WORK	VAT CHARGED AT 20%	TOTAL BILL
Car	£ 100	£ 20.00	£ 120.00
Van	£ 120		
Mini-bus	£ 150		
Coach	£ 190		

3