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.**
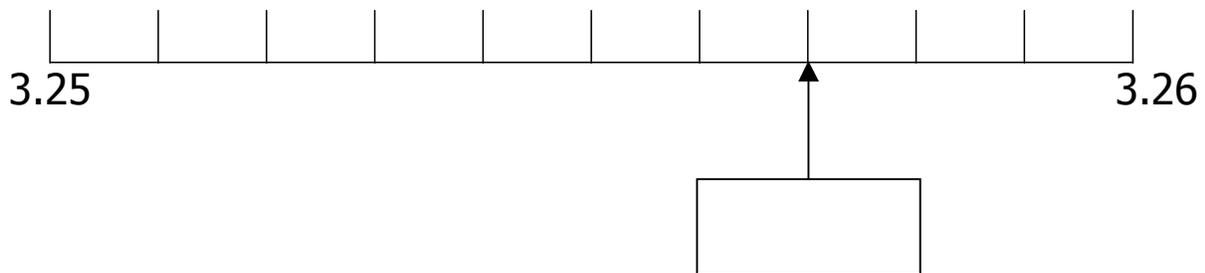
0.03   1.1   0.217   1.07   2.206

1

b)   What number does the arrow indicate?

3.25   3.26

1

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

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

1

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

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

1

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

$\dfrac{1}{2}$ < $\dfrac{\boxed{}}{\boxed{}}$ < $\dfrac{2}{3}$

1

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

0.5kg   400g   ¼ kg   0.6kg   ⅔kg

1

8. Calculate

¼ of 36 = ☐

$\frac{1}{7}$ of 28 = ☐
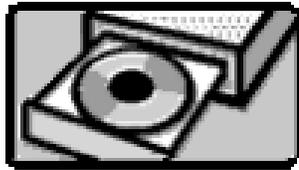
⅝ of 32 = ☐

$\frac{7}{10}$ 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.

Show your working

Calculate the missing prices:

a) Was **£60** ....now down to £ _____   **1**
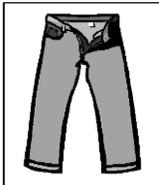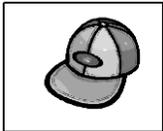
b) Was £ _____ ....now down to **£6.30**.   **2**

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?

and

1

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
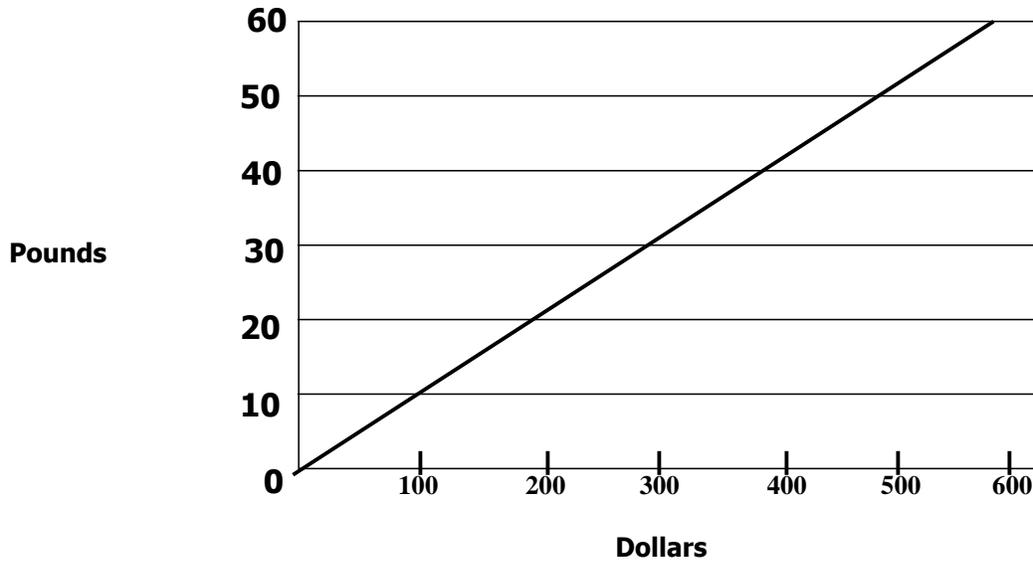
Pounds

Dollars

£1 can be exchanged for 9.7 dollars

a) **How many dollars could be exchanged for £50?**
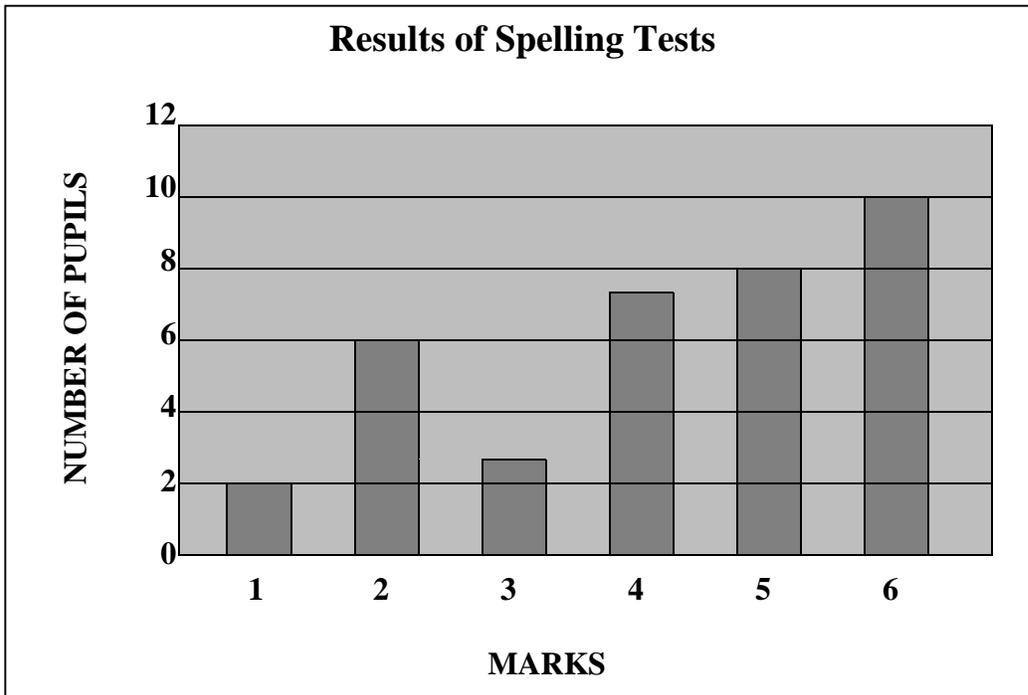
| 1 |

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

Results of Spelling Tests

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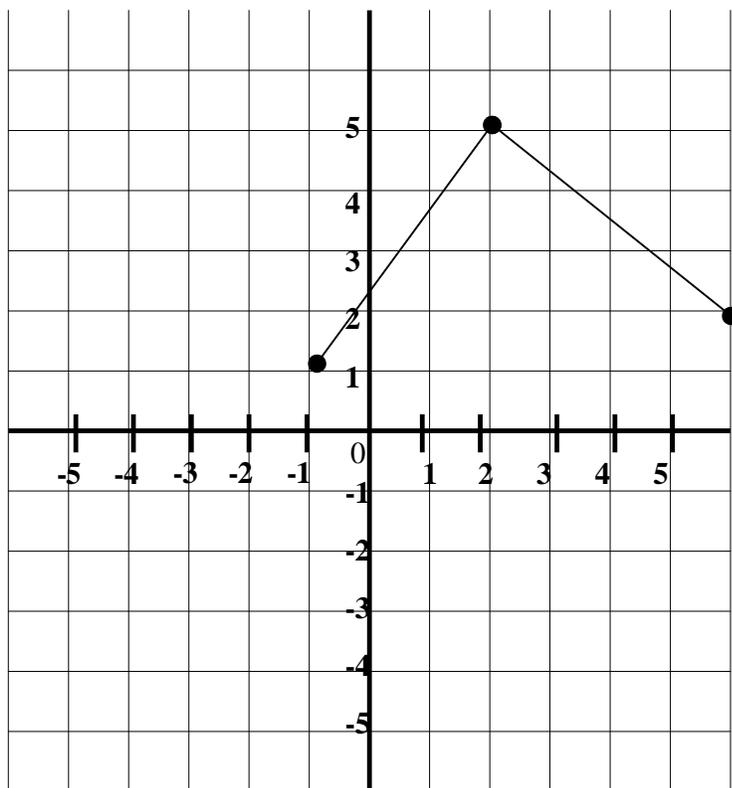
- The points (-1, 1), (2, 5) and (6, 2) are three of the four vertices of a square.
Plot the co-ordinates on the grid.

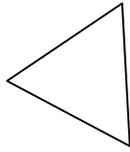What are the co-ordinates of the fourth vertex?

1

b) Look at the diagram

B (10,12)

C (----,----)

A (2,3)
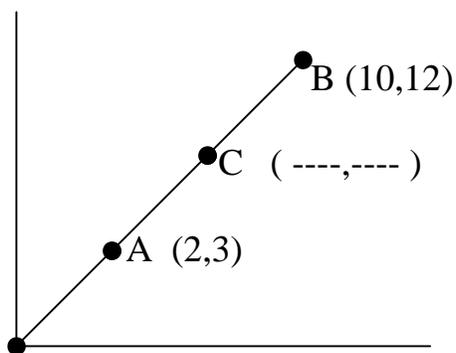
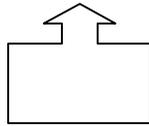C is halfway between A and B. What are the co-ordinates of C?

2

18. Tick the shape with only one pair of parallel sides.
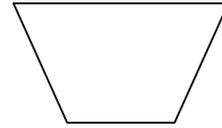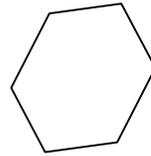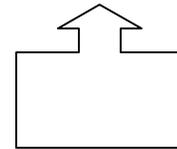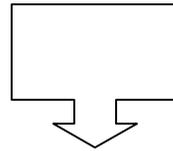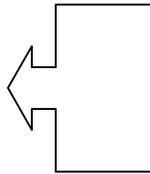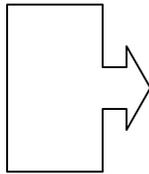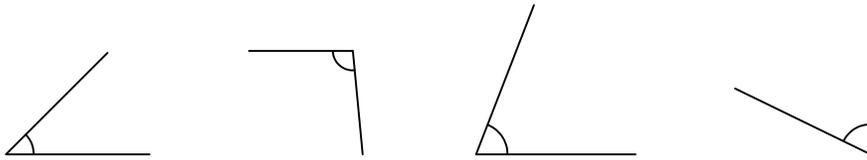
|1|

19.

This Shape ⌐ is rotated through 90° anti-clockwise

☐ ☐ ☐ ☐

Tick the shape that shows the new position.

|1|

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

2

21.

10cm

3.5cm

9cm

5.5cm

7cm
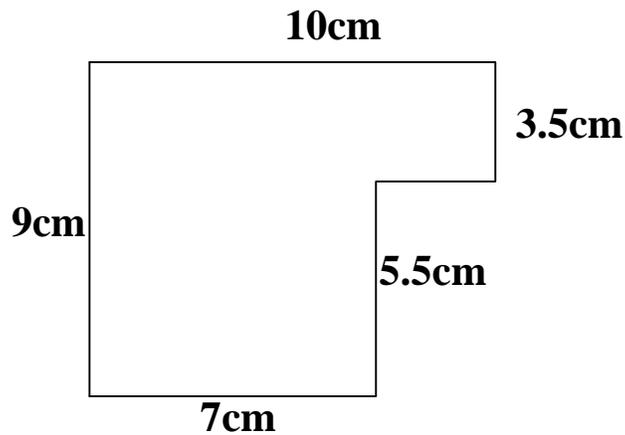
a) What is the perimeter of the shape?   cm   **1**

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

1

22. Look at the rectangle.

9cm

A   Area = 72 cm²
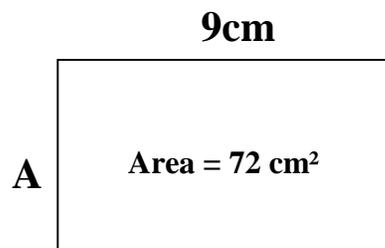
What is the length of side A?   cm   **1**

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

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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. $\underline{3}$ of them are girls.
                                           5

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