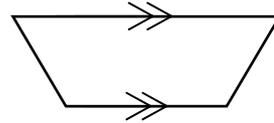


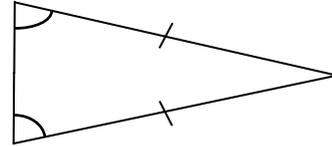
1 (a) This quadrilateral has one pair of parallel sides.



What is the special name given to this quadrilateral?

Answer [1]

(b) This triangle has two equal sides and two equal angles.



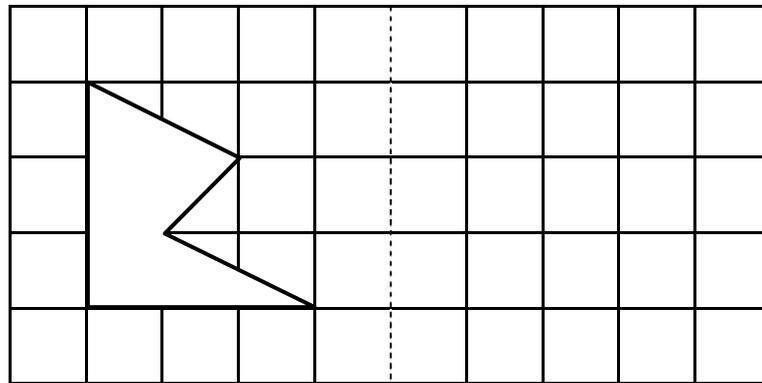
(i) What is the special name given to this triangle?

Answer [1]

(ii) Draw a line of symmetry on this triangle.

[1]

(c) Reflect the following shape in the dotted line.



[2]

2 Several athletes took part in a large competition.
The overall scores for five of the athletes are shown in the table.

Colin	8125
Michael	6750
Alan	3948
Robert	7712
Sean	6381

(a) Arrange these scores in numerical order, starting with the largest.

..... [1]

(b) Write in words the number of points scored by Sean.

..... [1]

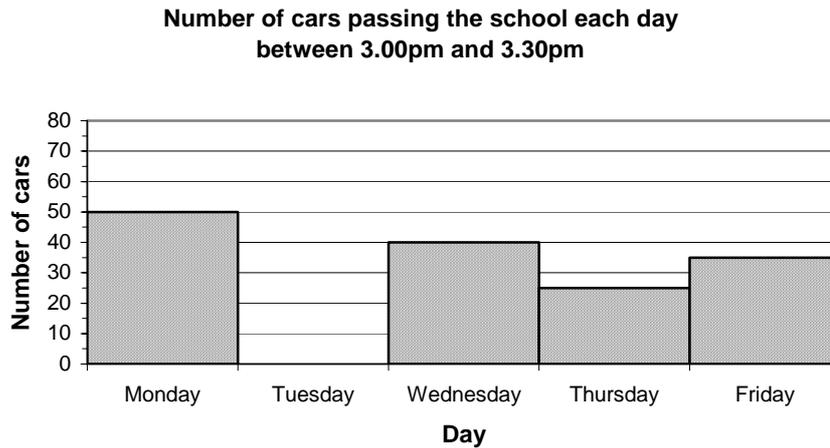
(c) How many more points did Robert score than Alan?

.....
..... Answer [2]

(d) John's score was $\frac{1}{5}$ of Colin's score.
Write down the number of points scored by John.

.....
..... Answer [2]

3 The bar chart shows the number of cars passing the school between 3pm and 3.30pm on each of five days in one school week. The bar chart is incomplete.



- (a) Write down the number of cars passing the school on
- (i) Wednesday Answer [1]
- (ii) Thursday Answer [1]
- (b) On Tuesday 60 cars passed the school. Show this on the bar chart. [1]
- (c) On Friday 35 cars passed the school.
What is the total number of cars passing the school over the five days, between 3pm and 3.30pm?
..... Answer [2]

- 4 I am rolling a fair six sided die. What is the probability that
- (a) I roll a six Answer [1]
- (b) I roll an odd number Answer [1]
- (c) I roll a multiple of three..... Answer [1]

- 5 (a) Write down the next two numbers in this sequence
- 2, 5, 8, 11, 14,,
- Answer [1]
- (b) Write down in words the rule you used to find the next two numbers.
-
- [2]
- (c) Write down the next number in this sequence
- 13, 9, 5, 1,
- Answer [1]

6 Here is a six pointed star.

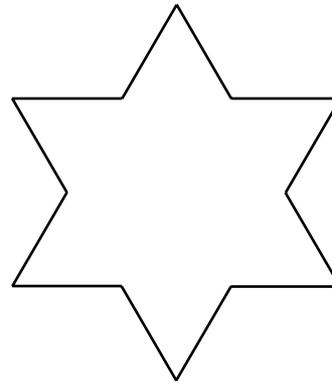
(a) On the star mark and label

(i) An acute angle with the letter A

(ii) An obtuse angle with the letter O

(iii) A reflex angle with the letter R

(iv) Any pair of equal size angles with the letter X



[1]

[1]

[1]

[1]

(b) What is the order of rotational symmetry of this star?

Answer [1]

7 A chocolate bar costs 25p. A packet of crisps costs 35p.

(a) Write down an expression for the cost in pence of buying **m** chocolate bars and **n** packets of crisps.

..... [2]

(b) Write down an expression for the change in pence that James receives when he pays for **m** chocolate bars and **n** packets of crisps. James pays with a £5 note.

..... [1]

Simplify these expressions

(c) $p + p + p + p$

Answer [1]

(d) $2q - 4q$

Answer [1]

Solve these equations

(e) $3x = 21$

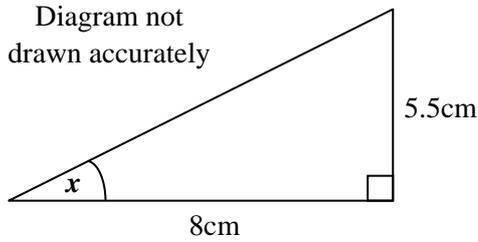
Answer $x =$ [1]

(f) $y - 5 = -1$

Answer $y =$ [1]

8 A flower show costs £450 to put on. Entry to the flower show costs £1.50 per person. 400 people attend the flower show. How much profit is made?

.....
.....
.....
..... Answer £ [4]



- (a) Make an accurate drawing of the triangle. [3]
- (b) On your drawing, measure the size of the angle marked x . Answer° [1]
- (c) Calculate the area of the triangle.....

 Answer cm^2 [2]

10 Paula was working out the mileage cost of hiring a van for a day. She used the formula

$$\text{Mileage Cost} = \text{Miles Travelled} \times \text{Mileage Rate}$$

The mileage rate was 6 pence per mile. The mileage cost came to £9.60.

- (a) How many miles had Paula travelled?

 Answermiles [2]

Paula worked out the total hire cost by using the formula

$$\text{Total Hire Cost} = \text{Standard Charge} + \text{Mileage Cost}$$

The total hire cost came to £44.60

- (b) Work out the standard charge.

 Answer £..... [2]
- (c) Paula was allowed 20% discount on the total hire cost. How much discount did Paula receive?

 Answer £..... [2]

- 11 (a) Work out $20 - 6 \times 2$
 Answer [2]
- (b) $3 - \sqrt{64}$
 Answer [2]

For Questions 12 onwards there is no marked out space to write your answers. Where there is not enough space, write your answers on separate paper. In your actual GCSE examination, marked spaces are normally provided on the whole paper.

12. Solve the equations–

a) $7x + 3 = -18$

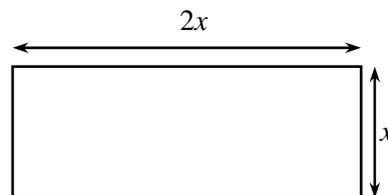
b) $3q - 5 = 2q + 4$

4 marks

13. On graph or squared paper draw the graph of $y + x = 9$

5 marks

14. Work out a formula for the perimeter and area of the rectangle.



4 marks

15. Work out–

(a) 3^2

(b) 5^3

(c) 10^5

3 marks

16. a) Estimate the answer to the following $\frac{48.2 + 32.8}{3.2 \times 8.7}$

b) Calculate an exact decimal equivalent of $\frac{7}{8}$

5 marks

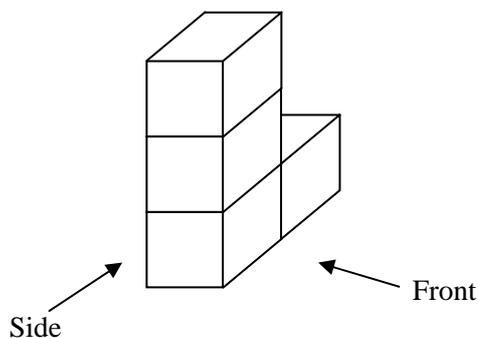
17. Calculate 5% of £267.

Give your answer to a) The nearest pound.

b) The nearest penny.

3 marks

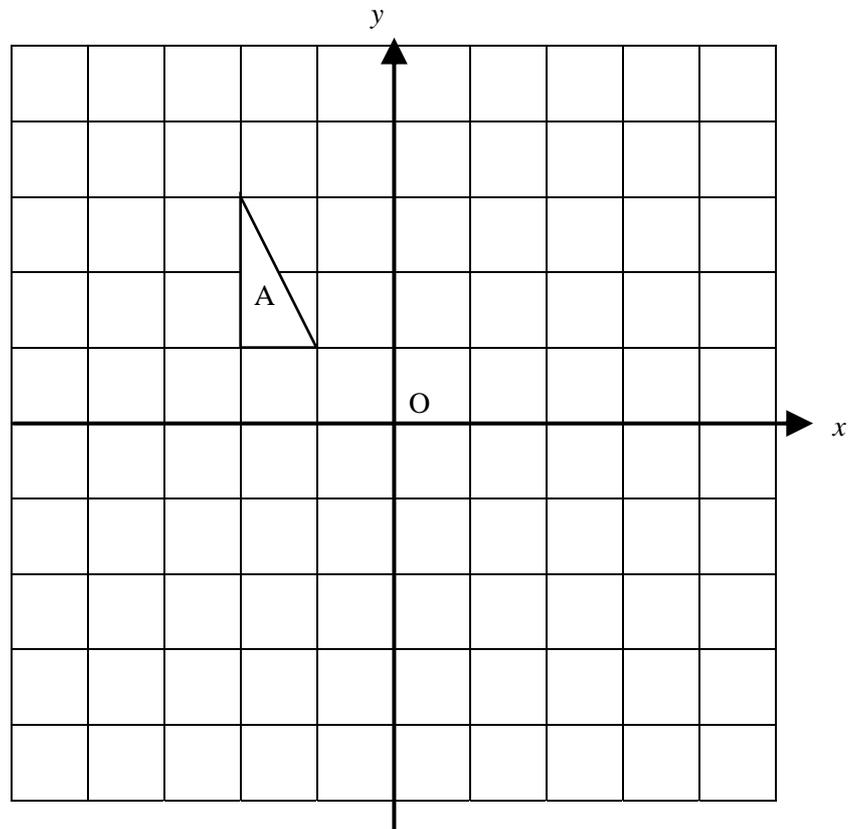
18. The drawing shows a three dimensional solid. The solid is made of cubes of side 1cm.



On squared paper, draw front and side elevations of this solid. Label each elevation.

3 marks

19.



The triangle A has been marked on the grid. The coordinates of the vertices of A are $(-1, 1)$, $(-2, 1)$, $(-2, 3)$.
Copy the diagram.

- (a) Rotate **triangle A** through one quarter turn clockwise about the origin. Label the image B.
- (b) Reflect **triangle B** in the x -axis. Label this image C.
- (c) **Triangle C** can be mapped onto **triangle A** by a single transformation.
Describe the transformation that maps C onto A. 4 marks

20. By dividing up a circle or otherwise construct a regular octagon. 3 marks

21. A box contains many pieces of card. Each piece of card has a number written on it.
The numbers on the card are either 1, 2, or 3.

When a piece of card is picked at random from the box, the probability that it is has a 1 written on it is 0.2.
The probability that it has a number 2 written on it is 0.3.

- (a) What is the probability of picking a card with the number 3 written on it?

There are 120 pieces of card in the box.

- (b) Work out how many cards there are with the number 1 written on them. 4 marks

22. 18 pupils from a class took a maths test. They scored the following results.

16 17 18 19 20 22
23 25 33 35 37 37
40 45 46 48 51 51

John begins to draw a stem and leaf diagram.

Stem	Leaves					Frequency
10	6					

- (a) Copy and complete the stem and leaf diagram to show these results. 4 marks
- (b) Name one piece of information does the stem and leaf diagram show, that a grouped frequency chart does not?