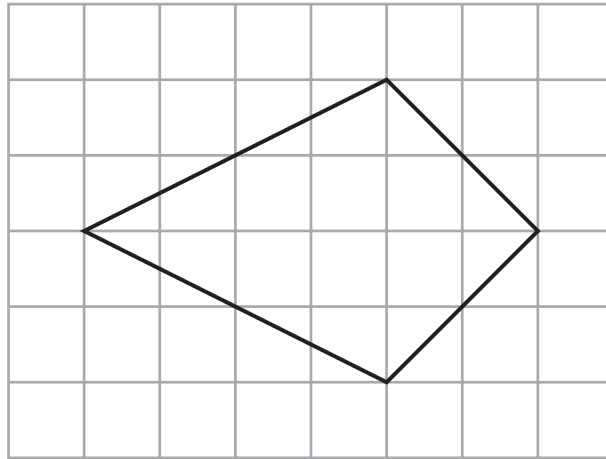
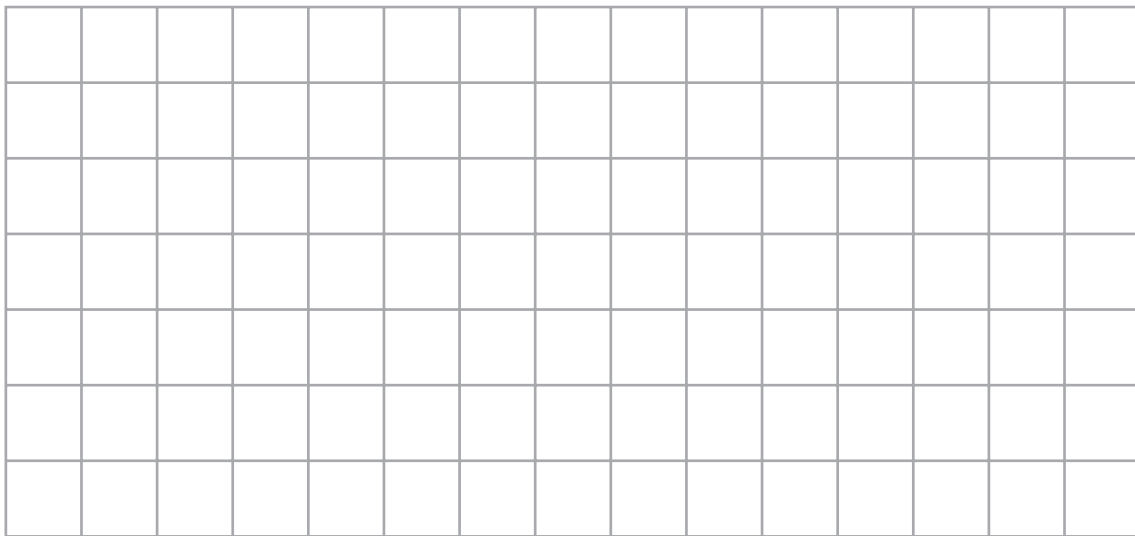


10 The diagram shows a kite drawn on a centimetre grid.



On the centimetre grid below, draw a rectangle that has the same area as the kite.



(Total for Question 10 is 3 marks)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



11 (a) Simplify  $c \times c \times c \times c \times c \times c$

.....  
(1)

(b) Simplify  $2h^3 + 5h^3 - h^3$

.....  
(1)

(c) Expand  $x(x + 5)$

.....  
(1)

(d) Factorise  $9y - 12$

.....  
(1)

Rosanna sells  $m$  small bags of marbles and  $p$  large bags of marbles.

Each small bag contains 15 marbles.

Each large bag contains 40 marbles.

The total number of marbles that Rosanna sells is  $T$

(e) Write down a formula for  $T$  in terms of  $m$  and  $p$

.....  
(3)

(Total for Question 11 is 7 marks)



12 Ingrid buys a bag in Sweden.

The price of the bag is 1342 Swedish Krona.

The price of an identical bag in Finland is 125 euros.

Using an exchange rate of

$$1 \text{ euro} = 11 \text{ Swedish Krona}$$

work out how much cheaper the bag is in Sweden than it is in Finland.

You must give the units of your answer.

.....  
(Total for Question 12 is 3 marks)

13 Hazel is buying a snack and a drink.

She can have a bar of chocolate (*B*) or some fruit (*F*) or a packet of crisps (*C*) as her snack.

She can have orange juice (*O*) or apple juice (*A*) or water (*W*) as her drink.

Write down all the possible combinations Hazel can have.

.....  
.....  
.....  
(Total for Question 13 is 2 marks)





- (a) Describe fully the single transformation that maps shape **A** onto shape **B**.

.....  
 .....  
 (2)

- (b) On the grid, reflect shape **A** in the line with equation  $x = -1$

(2)

(Total for Question 14 is 4 marks)



15 Use your calculator to work out the value of

$$\frac{5.21 + 6.37}{9.8} + 8.3^2$$

Write down all the figures on your calculator display.

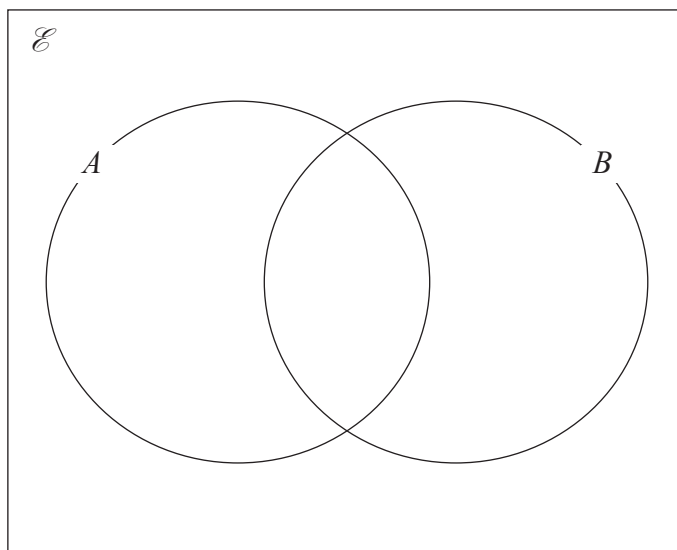
.....  
(Total for Question 15 is 2 marks)

16  $\mathcal{E} = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$

$$A = \{2, 3, 7, 8, 9\}$$

$$B = \{1, 2, 4, 5, 7, 8, 10\}$$

Complete the Venn diagram for this information.



(Total for Question 16 is 3 marks)



17 Here are some integers where  $a < b < c < d$

$a$        $b$        $c$        $d$        $d$        $d$

The mode of the integers is 9

The median of the integers is 8

The range of the integers is 4

Work out the value of  $a$ , the value of  $b$ , the value of  $c$  and the value of  $d$

$a =$  .....

$b =$  .....

$c =$  .....

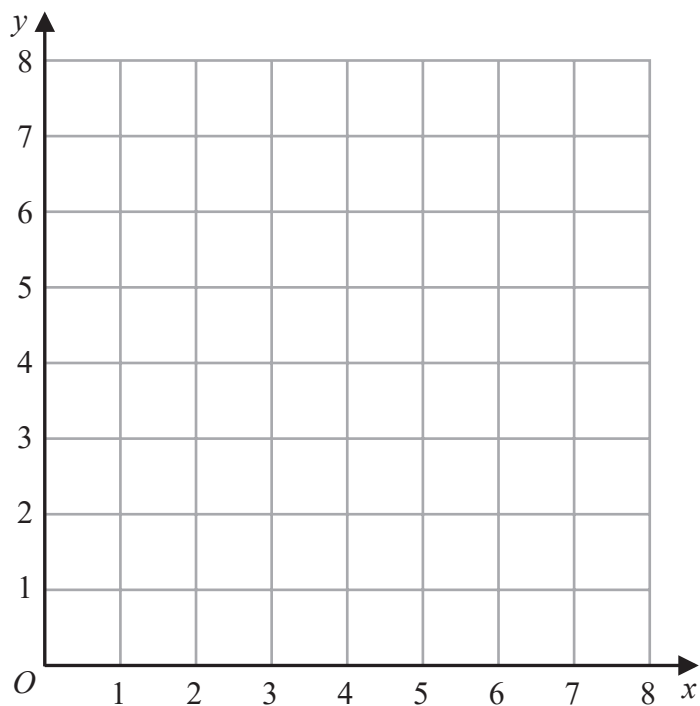
$d =$  .....

(Total for Question 17 is 3 marks)



18 (a) On the grid, draw and label with its equation the straight line with equation

(i)  $y = 1$       (ii)  $x = 2$       (iii)  $x + y = 7$



(3)

(b) Show, by shading on the grid, the region that satisfies **all three** of the inequalities

$y \geq 1$        $x \geq 2$        $x + y \leq 7$

Label the region **R**.

(1)

(Total for Question 18 is 4 marks)

