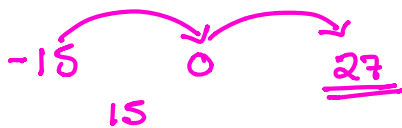**Answer ALL NINETEEN questions.**

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 In Norway last year, the lowest temperature was −15°C.
In Norway last year, the highest temperature was 42°C greater than the lowest temperature.

Work out the highest temperature in Norway last year.

-15   0   27
    15

-15 + 42 = 27

........................27........................° C

(Total for Question 1 is 2 marks)

2 $y = 6x - 5$
Work out the value of y when $x = 4$

$y = 6 \times 4 - 5$
$= 24 - 5$
$= 19$

$y =$ ....19........................

(Total for Question 2 is 2 marks)

3 Here is a list of ingredients for making 10 scones.

Mia wants to make 25 scones.
Work out how much sugar she needs.

SUGAR
10 scones   = 40g
20 scones   = 80g
5 scones   = 20g
_____
25 scones   = 100g

Ingredients for 10 scones	
75 g	butter
350 g	self-raising flour
40 g	sugar
150 ml	milk
2	eggs

........................100........................ g

(Total for Question 3 is 2 marks)

4   Simplify $e + e + e + e$

= 4e

(not e^4 which would
   be $e \times e \times e \times e$)

.... **4e** ....

(Total for Question 4 is 1 mark)

5   Write these numbers in order of size.
Start with the smallest number.

0.5   0.55   0.45

$$\frac{1}{2} \qquad 0.55 \qquad 45\%$$

2   3   1

.... **45% $\frac{1}{2}$ 0.55** ....

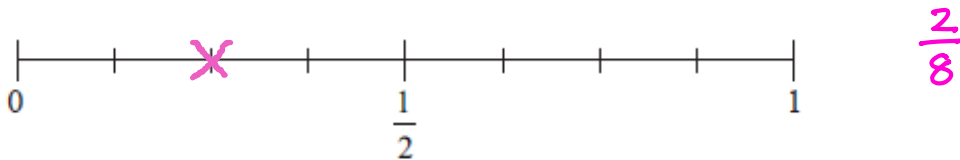**(Total for Question 5 is 1 mark)**

6   Here is a list of 8 letters.

B   C   A   A   A   A   B   A

One of the 8 letters is going to be picked at random.

(i)   On the probability scale, mark with a cross (×) the probability that this letter will be B.

$\frac{2}{8}$

(1)

(ii)   Find the probability that this letter will be C.

.... $\frac{1}{8}$ .... **(1)**

(Total for Question 6 is 2 marks)

7   There are 15 sweets in a jar. 4 of the sweets are red.
Jill takes at random a sweet from the jar.

(*a*)   Write down the probability that the sweet is red.

R   Not Red   Total
4   11   15

.... $\frac{4}{15}$ .... **(1)**

There are only green counters and blue counters in a bag.

A counter is taken at random from the bag.
The probability that the counter is green is 0.3

(*b*) Find the probability that the counter is blue.

G   B
0·3   0·7
1 − 0·3 ↗

.... 0·7 .... **(1)**

(Total for Question 7 is 2 marks)

---

8 There are only blue counters, green counters, red counters and yellow counters in a bag.

The table shows the number of blue counters in the bag.

Colour	blue	green	red	yellow
Number of counters	30			

There is a total of 100 counters in the bag. Ashin takes at random a counter from the bag.

Find the probability that the counter is **not** blue.

100 − 30 = 70

$$\frac{70}{100}$$

(Total for Question 8 is 1 mark)

---

9 Simplify $3 \times w \times 5 \times t$

$3 \times 5 \times w \times t$

.... 15wt ....

(Total for Question 9 is 1 mark)

---

10 Change 40 centimetres into millimetres.

1 cm = 10 mm
×40 ↓ 40 cm = 400 mm ⤴ ×40

.... 400 .... millimetres

(Total for Question 10 is 1 mark)

11 Find the value of *y*.

$$360 - 70 = 290$$

70°

y°
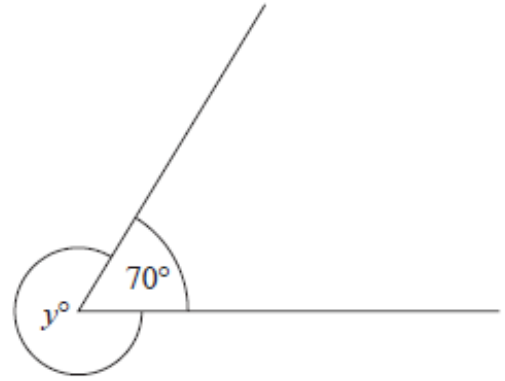
y = ... 290 ....

(Total for Question 11 is 1 mark)

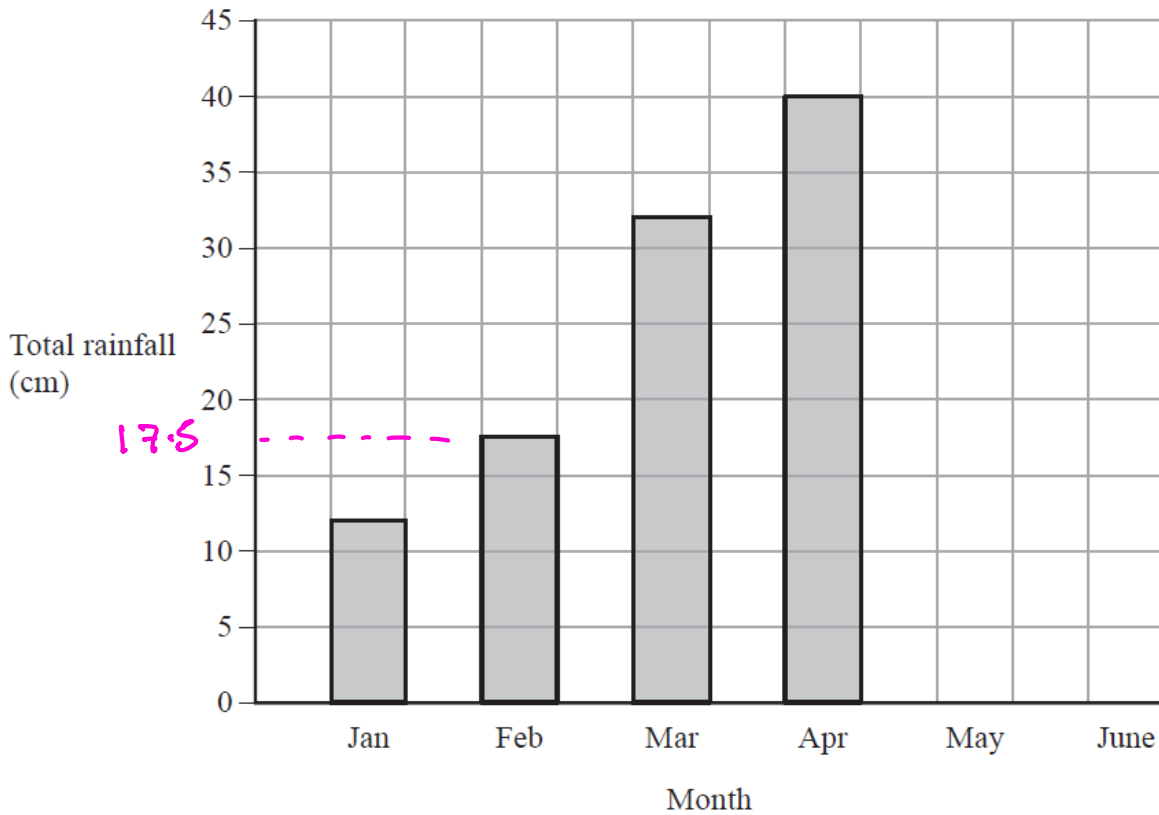**12** Here are two parallelograms on a coordinate grid.
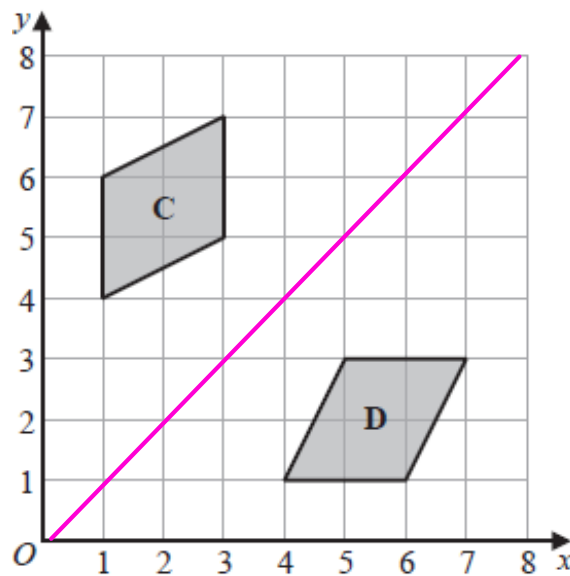
Parallelogram **D** is a reflection of parallelogram **C**.

On the grid, draw the mirror line.

(Total for Question 12 is 1 mark)

13 The bar chart shows information about the total rainfall each month for four months in a city.
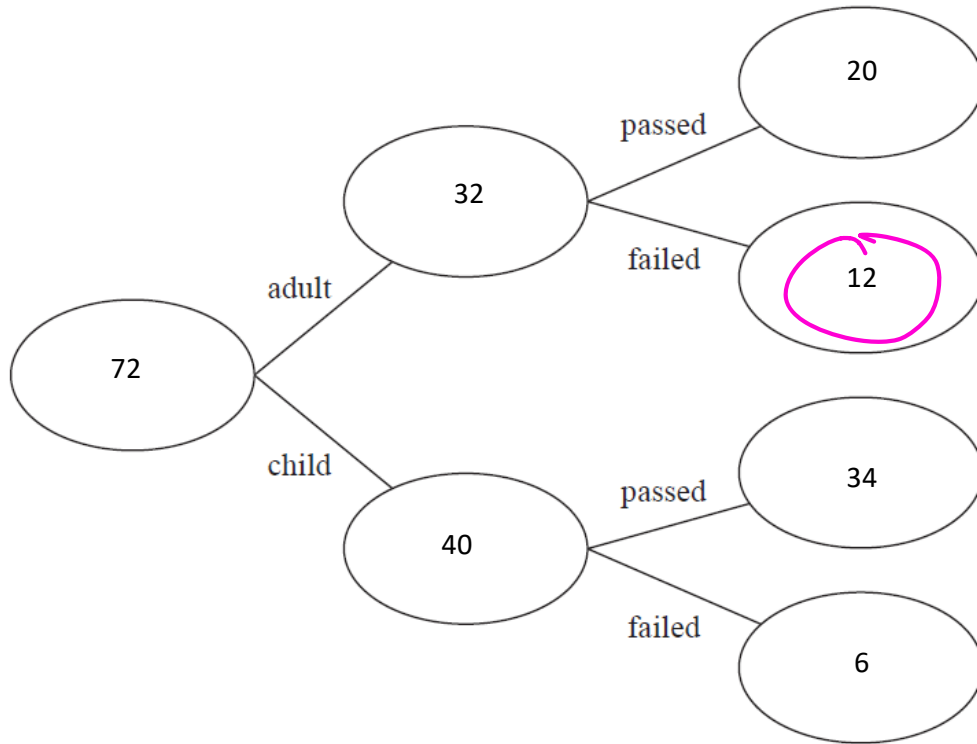

Rupa says:
    "In February there was 15.5 cm of rainfall because the bar is half a square above 15"

Explain why Rupa is incorrect.

Half asquare is worth 2.5cm, so febrary is 17.5cm

....

....

(Total for Question 13 is 1 mark)

14 Here is a completed frequency tree showing information about people who did a test.

One of these people is picked at random. 72

Find the probability that this person is an adult who failed the test.

$\frac{12}{72}$

....

(Total for Question 14 is 2 marks)

15 Here are the ages, in years, of 15 people.

19	28	29	33	27
27	37	25	27	37
17	45	47	25	26

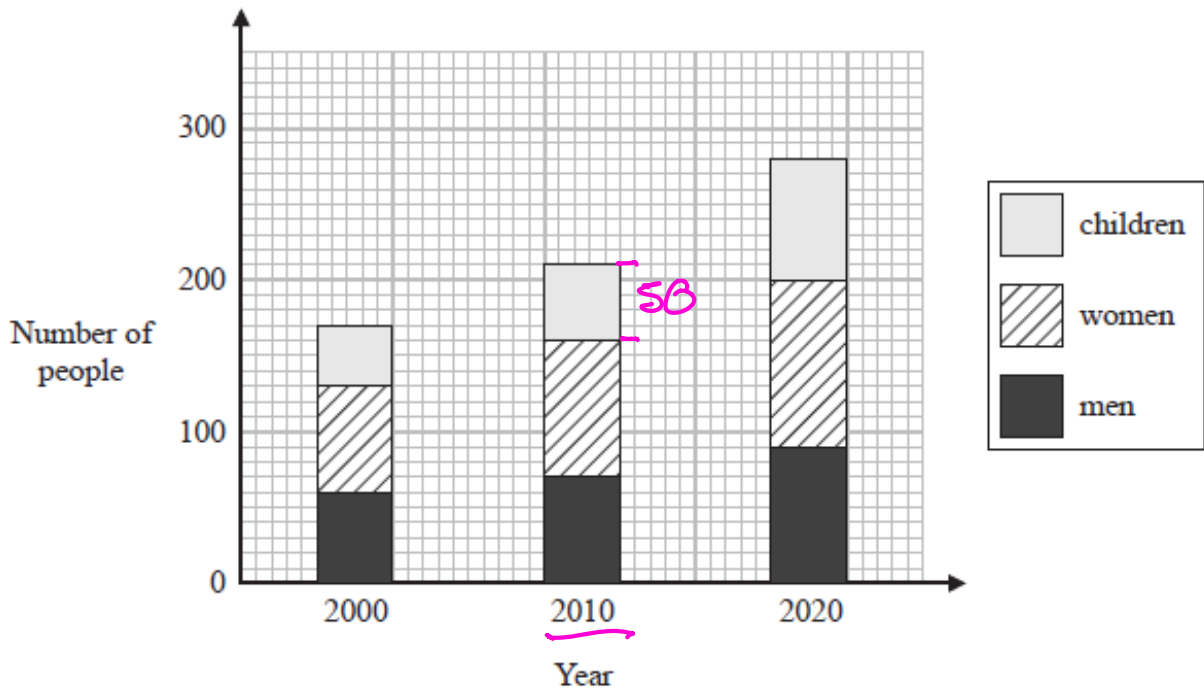Show this information in a stem and leaf diagram.

```
1 | 9 7
2 | 8 9 7 7 5 7 5 6
3 | 3 7 7
4 | 5 7
```

```
1 | 7 9
2 | 5 5 6 7 7 7 8 9
3 | 3 7 7
4 | 5 7
```

Key: 1 | 9 = 19

(Total for Question 15 is 3 marks)

16 The composite bar chart shows information about the number of people living in a village.

Find the number of children living in the village in the year 2010

..............................50.................................

(Total for Question 16 is 1 marks)

---

17 A shop sells jars of coffee. Each jar of coffee costs £4

Michael has £23

(*a*) Work out the greatest number of jars of coffee Michael can buy.

$6 \times 4 = 24$ ✗
$5 \times 4 = 20$ ✓

.....................5........................ **(2)**

In a sale on Wednesday, jars of coffee are sold at half price.

Michael thinks that he can now buy exactly twice the number of jars of coffee for £23

(*b*) Is Michael correct? You must give a reason for your answer.

$11 \times 2 = 22$ ✓
$12 \times 2 = 24$ ✗
$10 \times 2 = 20$ ✓

Michael is incorrect.
Exactly twice would be 10 jars (£20) but he
can buy 11 jars (£22) and have £1 left. **(1)**

(Total for Question 17 is 3 marks)

18 Increase 240 by 20%

$10\% = 24$
$20\% = 48$

$240 + 48$
$= 288$

........................288........................

(Total for Question 18 is 3 marks)

TOTAL FOR PAPER IS 31 MARKS