DOWNSIDE
SCHOOL

DOWNSIDE SCHOOL MATHEMATICS DEPARTMENT

11+ Entrance Examination

SPECIMEN PAPER A

Time Allowed: 1 hour

Name: _____

- Answer all questions in this paper.
- Try to get correct solutions rather than hurrying.
- You may **NOT** use a calculator throughout the paper.
- It is important that you demonstrate every stage of your working.

1   Calculate the answers to the following sums:

(a)   3 4 8 2

        2 2 5 6 +
        _____

        _____

(b)   4 5 9 3

        1 7 6 6 –
        _____

        _____

(c)   5 7 8 1

            6 X
        _____

        _____

(d)   3 9 4 5

            5 ÷
        _____

        _____

(e)   9 2 4

          5 3 X
        _____

        _____

(f)   8 1 9 4

          1 7 ÷
        _____

        _____

Space for additional working:

2   Fill in the blank squares with a number to make these sums correct:

(a)   4 5 8 2 + ☐ = 1 1 9 3 7

(b)   ☐ X 8 = 3 1 5 3 6

(c)   (8 X 7) – ☐ = 3 2

3   Margaret thinks of a number. She multiplies this number by 7 and then adds 12.
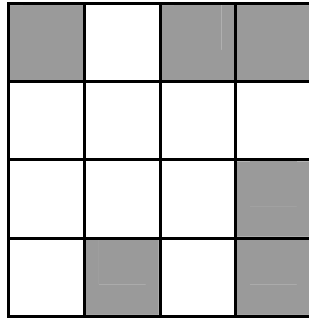   Her answer is 75. What was her original number?

Answer: _____

4   An isosceles triangle has a perimeter of 15 cm. One of the sides is 7 cm. What are
     the lengths of the other two sides (NOTE: there are two possible answers to this)

Answer: _____ cm   and _____ cm

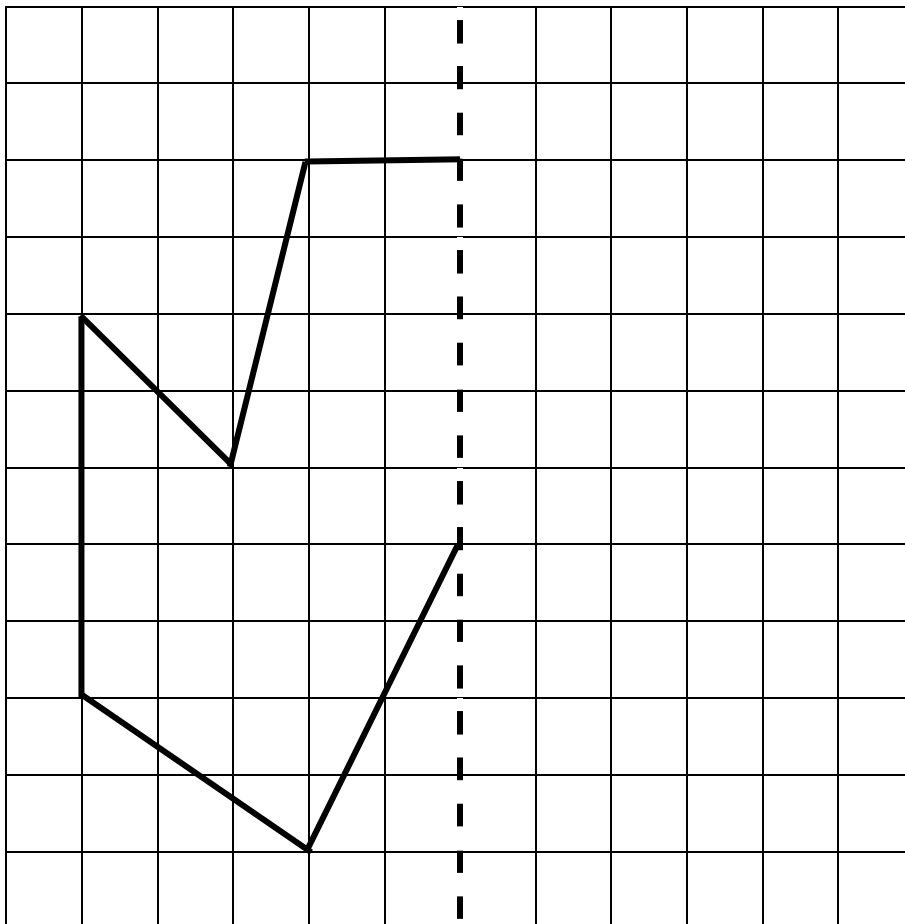OR: _____ cm   and _____ cm

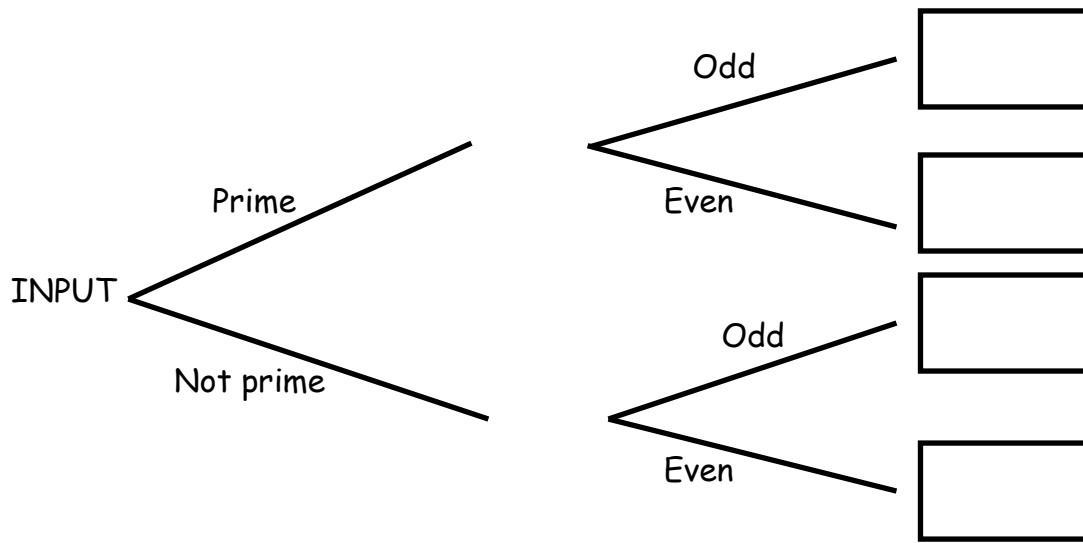5   What fraction of this square is shaded? Give your answer as a fraction in its lowest terms.

Answer: _____

6   Reflect the shape shown on the grid below across the mirror line (shown in bold dashes)

7   Use the sorting diagram below to sort the numbers 7, 8 and 9 – placing each one in one of the boxes at the end. (NOTE: Not every box will be filled in)

```
                                              Odd      ┌──────┐
                                             ╱         │      │
                                  Prime     ╱          └──────┘
                                       ╲   ╱
                                        ╲ ╱ Even       ┌──────┐
                                         ╳             │      │
INPUT ─────                              ╱ ╲           └──────┘
          ╲                             ╱   ╲ Odd      ┌──────┐
           ╲  Not prime                ╱     ╲         │      │
            ╲─────────────────────────╱       ╲        └──────┘
                                       ╲ Even          ┌──────┐
                                        ╲              │      │
                                         ╲             └──────┘
```

8   Add the next two numbers to each of the following sequences, in the boxes provided:

(a)   5   7   9   11   ☐ ☐

(b)   3   6   12   24   ☐ ☐

(c)   15   11   7   3   ☐ ☐

(d)   4.2 5.8 7.4 9.0 ☐ ☐

9   Peter is collecting money for charity. The amount he collected, and the number of individual donors is recorded in the table below:

	Number of donors	Amount collected
Monday	22	£12.50
Tuesday	12	£7.70
Wednesday	31	£16.33
Thursday	18	£11.02
Friday	25	£20.00

(a)   How much money did he collect on the day he had the most donors?

Answer: £_____

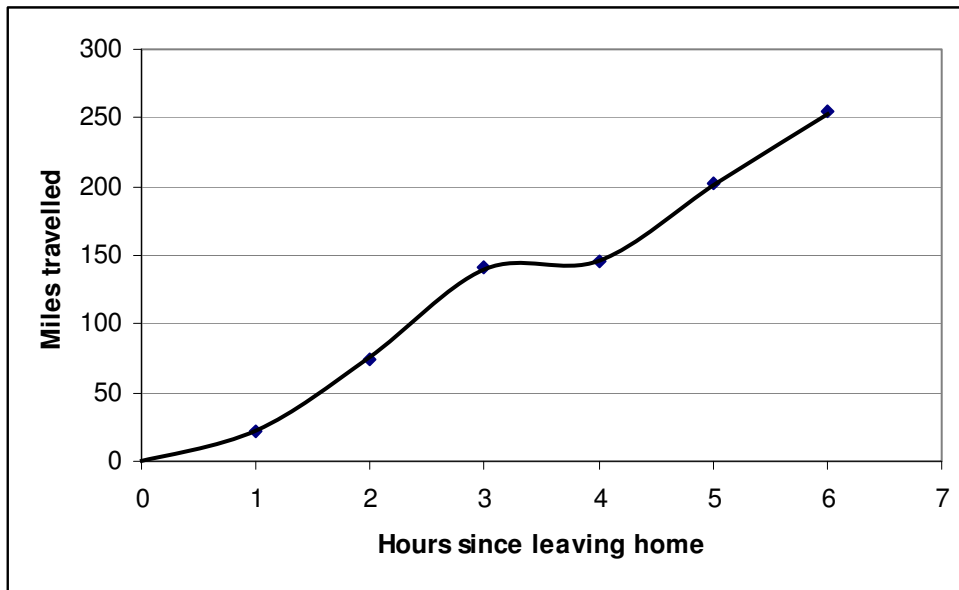(b)   How much more money did he collect on Thursday than Tuesday?

Answer: £_____

(c)   How many donors did he see in total throughout the week?

Answer: _____

(d)   How much money did he collect in total throughout the week?

Answer: £_____

10   Philip leaves home to drive to his parents house. The number of miles he drives over the given time since leaving home is shown in the diagram below:

(a)   How far, approximately, does he travel in the first two hours of his journey?

Answer: _____

(b)   If he leaves home at 10 a.m. at what time, approximately, did he stop for lunch?

Answer: _____

(c)   What is his average speed, in miles per hour, for the whole journey?

Answer: _____

11   Two angles in a triangle are 72° and 46°. What is the third angle?

Answer: _____

12   For Christmas three brothers are given £60 from their Uncle. Andrew gets a third of this, and Daniel gets a quarter of it. How much does Thomas (the other brother) get?
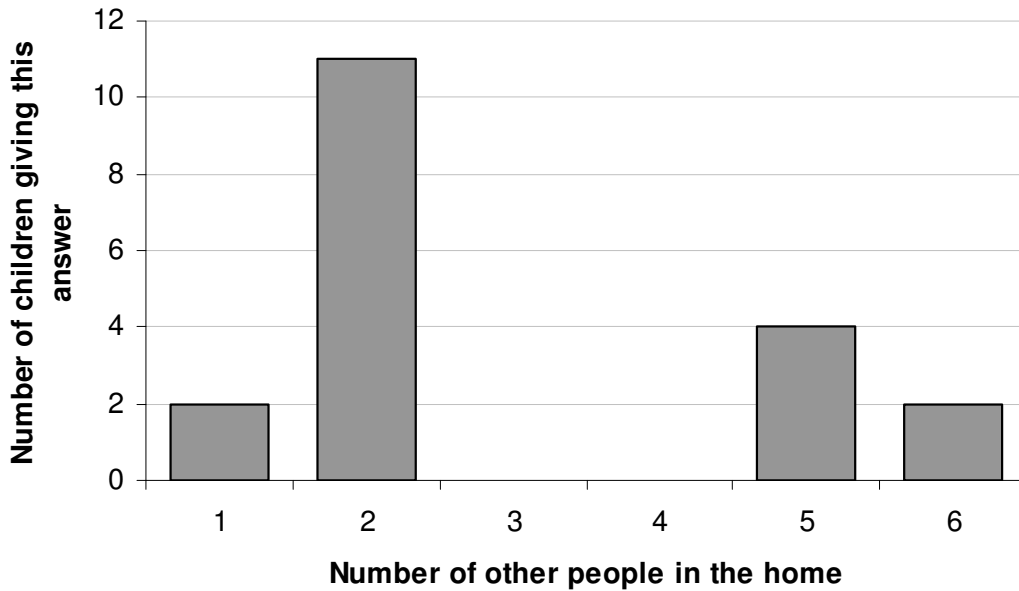
Answer: £_____

13   What is:

(a)   20% of 170?

Answer: _____

(b)   15% of £286?

Answer: _____

14   A class of school children were asked how many people they lived with in their home. Their results are summarised in the bar chart below.

a)   7 of the children lived with three other people. Add the bar to represent this information in the correct position.

b)   There were 36 children in the class. Calculate how many children lived with four other people, and draw this bar to complete the chart.

c)   How many people in total lived in the homes of all 36 children?

Answer: _____

15   Justin travels on a train that leaves London at 10:34 and arrives in Bath at 13.12

     a)   How long does the journey take?

                                   Answer: _____

     b)   The train is 19 minutes late, and the journey takes 51 minutes longer than expected due to difficulties on the track. At what time does Justin arrive in Bath?
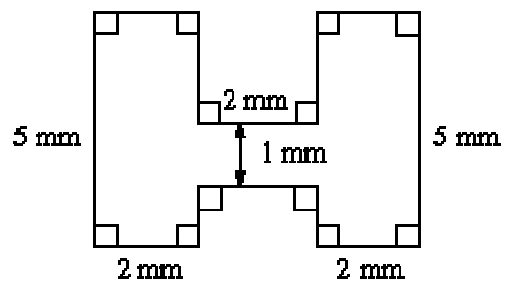
                                   Answer: _____

16   30 children are going on a school trip. The trip costs £5 including lunch. However the students may pay only £3 and bring their own packed lunch if they wish. The total cost of the trip is £110. How many of the students took a packed lunch?

                                   Answer: _____

17   Find the area of this shape:

5 mm ... 2 mm ... 1 mm ... 5 mm ... 2 mm ... 2 mm

Answer: _____mm²