

DOWNSIDE --- SCHOOL

DOWNSIDE SCHOOL MATHEMATICS DEPARTMENT

11+ Scholarship 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) $34 \cdot 82$
 $2 \cdot 256 +$

(b) $459 \cdot 3$
 $1 \cdot 766 -$

(c) 5781
 $736 \times$

(d) 19375
 $31 \div$

(e) $3\frac{2}{3} + 5\frac{5}{7}$

(f) $4\frac{1}{6} \times 3\frac{1}{5}$

Space for additional working:

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

(a) $4\frac{2}{3} + \boxed{} = 5\frac{2}{5}$

(b) $\boxed{} \times 15 = 102405$

(c) $(18 \times 11) - \boxed{} = 77$

3 Margaret thinks of a number. She multiplies this number by 17 and then adds 36. Her answer is 427. What was her original number?

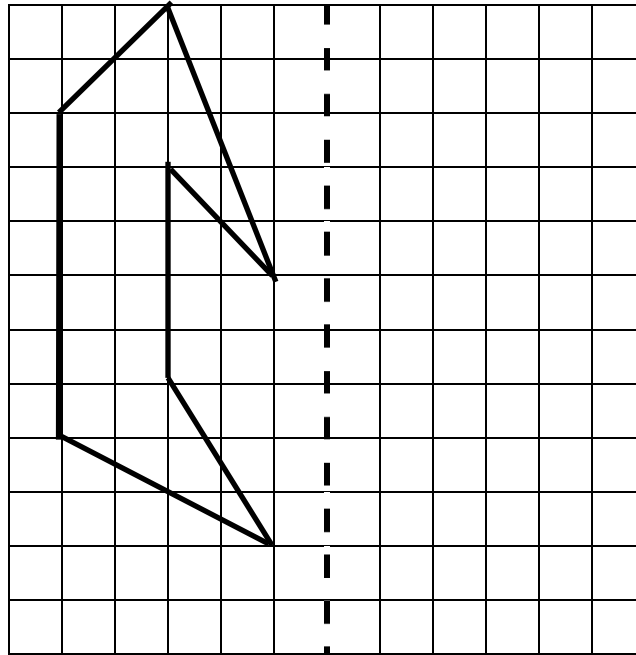
Answer: _____

4 An isosceles triangle has a perimeter of 98 cm. One of the sides is 39 cm. What are the lengths of the other two sides (NOTE: there are two possible answers to this)

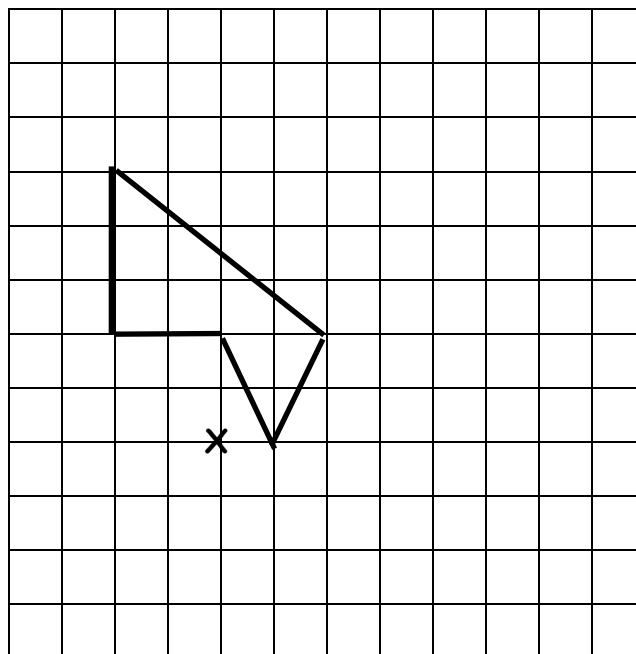
Answer: _____ cm and _____ cm

OR: _____ cm and _____ cm

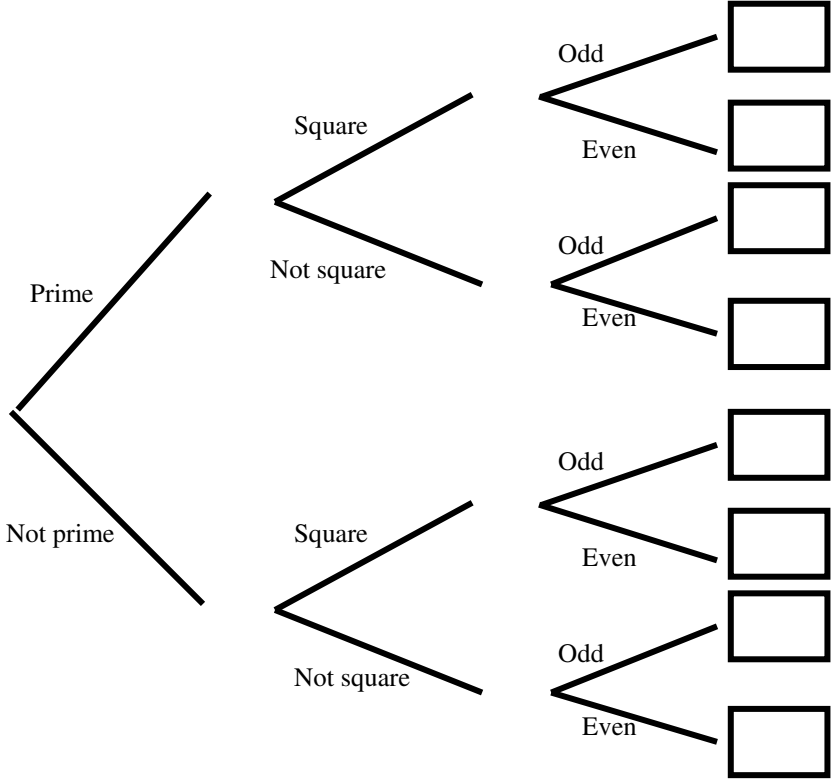
- 5 (a) Reflect the shape shown on the grid below across the mirror line (shown in bold dashes)



- (b) Rotate the shape shown 90° clockwise about point X



6 Use the sorting diagram below to sort the numbers 3, 4, 5, 6, 7, 8, and 9 - placing each one in one of the boxes at the end. (NOTE: Not every box will be filled in)



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

(a) 21 73 125 177

(b) 5 15 45 135

(c) 24 17 10 3

(d) 5.13 7.82 10.51 13.2

8 Peter doing research at school on different countries. He finds information about several countries on a database on the Internet. A small sample of the information he collects is shown below:

	Name	Capital	Continent	Area	Population
12	Finland	Helsinki	North Europe	337000	4700000
13	France	Paris	Central Europe	551000	53000000
14	Germany	Berlin	Central Europe	470000	69300000
15	Guyana	Georgetown	South America	214969	800000
16	Italia	Rome	Central Europe	301000	56200000
17	Jamaica	Kingston	North America	11424	2500000
18	Mexico	Mexico City	North America	1967180	88600000
19	Nicaragua	Managua	North America	139000	3900000
20	Norway	Oslo	North Europe	324000	4100000
21	Paraguay	Asuncion	South America	406576	4660000

(a) What is the population of the third largest country of those you can see in this sample?

Answer: _____

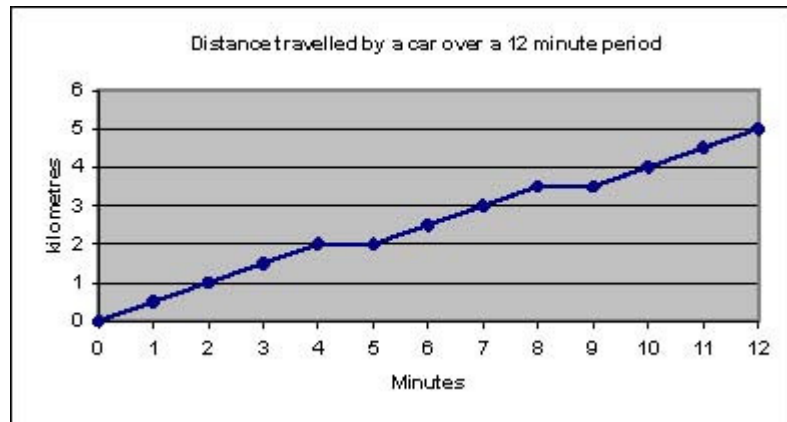
(b) How many more people live in Germany than in Paraguay?

Answer: _____

(c) What is the total population of the three countries shown from Central Europe?

Answer: _____

- 9 The diagram below shows the distance covered by a car over a 12 minute period by a driver going to work.



- (a) Explain the shape of the graph immediately after the 4th minute and the 8th minute?

- (b) What is the car's average speed, in kilometres per hour, over the full 12 minutes?

Answer: _____

- (c) What is the car's average speed, in kilometres per hour, over the first 4 minutes?

Answer: _____

- 10 One angle in a triangle is 72° . One of the other two angles is three times as large as the third. How large is the largest angle in this triangle?

Answer: _____

- 11 Paul inherits £7200. He gives away a quarter of this to his best friend, and then spends a third of the remaining total on a holiday. He then gives £750 to charity. How much does he have left?

Answer: £_____

- 12 What is:

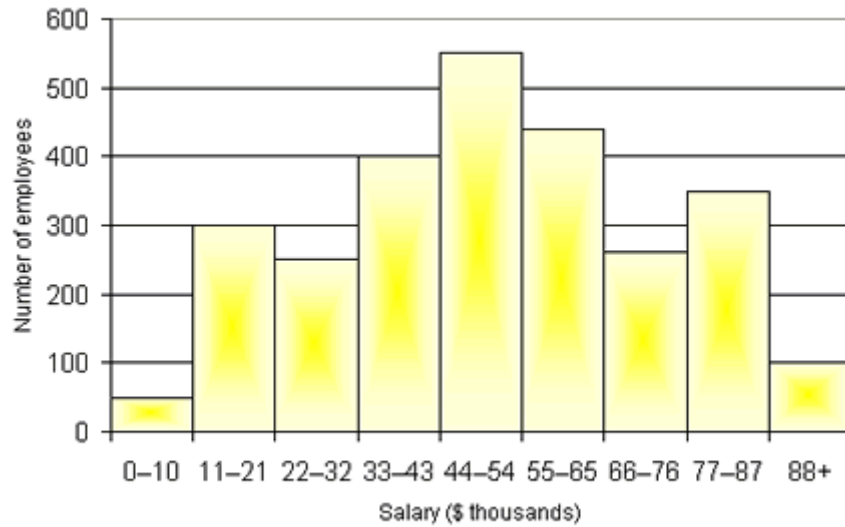
(a) 45% of 693kg?

Answer: _____

(b) $17\frac{1}{2}\%$ of £864?

Answer: _____

- 13 The salaries of all the employees of a large company are shown in the bar chart below



- a) How many employees, approximately, earned between 22 and 32 thousand dollars?

Answer: _____

- b) How many employees, approximately, earned \$55000 or more?

Answer: _____

- c) If all the employees who earned between 33 and 43 thousand dollars actually earned exactly \$40000 each, how much did they earn in total between them?

Answer: _____

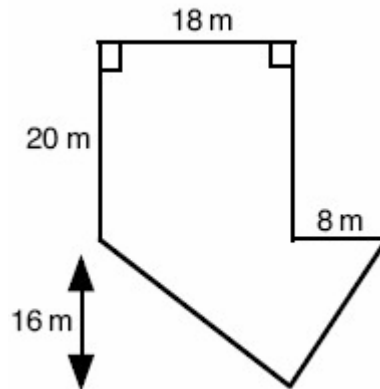
- 15 Samuel travels on a train that leaves London at 10:54 to travel to Bath. The journey is 180 km, and the train travels at an average speed of 100 km/h. At what time does the train arrive in Bath?

Answer: _____

- 16 50 children are going on a school trip. The trip costs £7.20 including lunch. However the students may pay only £4.70 and bring their own packed lunch if they wish. 23 of the students choose to bring their own lunch. Because of the large numbers involved the company organising the trip offers the school a 10% discount. How much does the total trip cost?

Answer: _____

17 Find the area of this shape:



Answer: _____ m²

NOW GO BACK AND CHECK THROUGH YOUR WORK CAREFULLY