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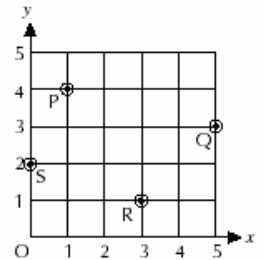
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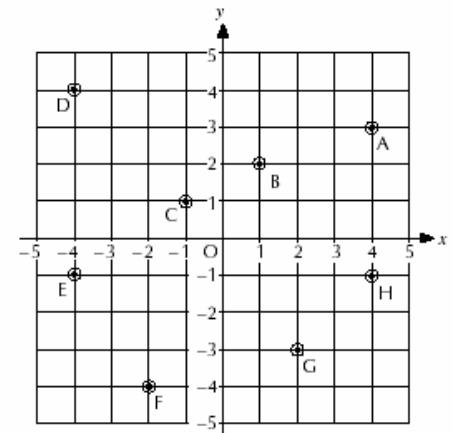
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### Home Learning 7.3    Date Due:.....

- 1 Write down the coordinates of the points P, Q, R and S on the grid.
- 2
  - a Draw a grid as in Question 1 and plot the points A(1, 4), B(5, 4), C(5, 1) and D(1, 1).
  - b Join the points to form the rectangle ABCD.
  - c What are the coordinates of the mid-point of AB?



- 3 Write down the coordinates of the points A, B, C, D, E, F, G and H on the grid.
- 4
  - a Draw a grid as in Question 3 and plot the points P(1, 4), Q(4, 2) and R(1, -4)
  - b The points form three vertices of a kite PQRS. Plot the point S and draw the kite.
  - c Write down the coordinates of the point S.







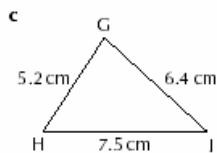
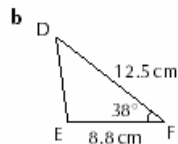
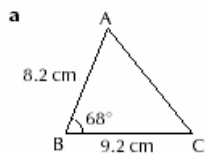






# Home Learning 11.2 Date Due:.....

1 Construct each of the following triangles. Remember to label every line and angle you have drawn.



- 2 **a** Construct the triangle PQR with  $PQ = 7.5$  cm,  $PR = 5.2$  cm and  $\angle P = 54^\circ$ .  
**b** Measure the length of the side QR to the nearest millimetre.  
**c** Bisect  $\angle P$ , showing all your construction lines.

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# Home Learning 9.3 Date Due:.....

1 Circle the operation that you do first in each of these calculations. Then work it out.

- a**  $3 + 4 \times 6$       **b**  $(3 + 4) \times 6$       **c**  $24 - 8 \div 4$       **d**  $(24 - 8) \div 4$

2 Work out each of the following, showing each step of the calculation.

- a**  $12 - 2 \times 5$       **b**  $(12 - 2) \times 5$       **c**  $(2 + 4) \times (5 - 3)$       **d**  $3^2 + 5 - 2$   
**e**  $3 \times (2^2 + 1)$       **f**  $(3 + 2)^2 + 1$

3 Put brackets in each of the following to make the calculation true.

- a**  $2 + 6 \times 3 = 24$       **b**  $3 + 1^2 - 6 = 10$       **c**  $36 \div 12 - 6 = 6$

4 Explain clearly why  $3 \times 2^2$  is not 36.

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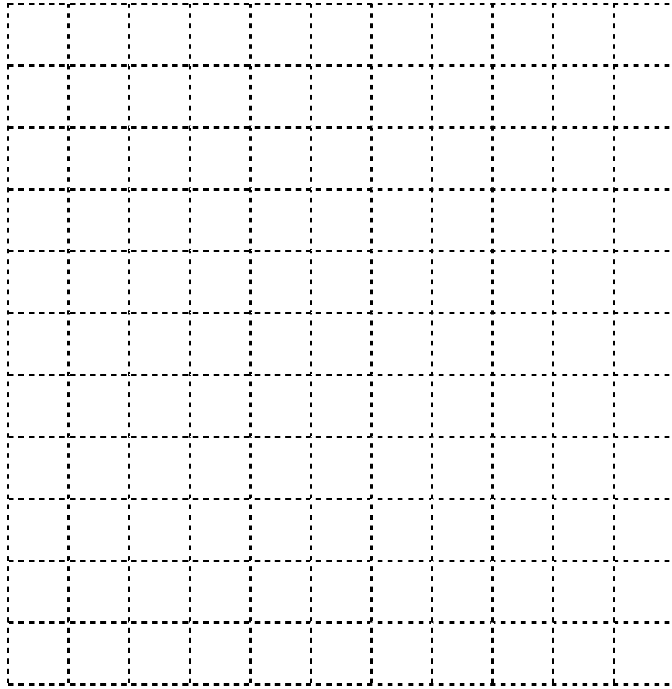
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Home Learning 10.1 Date Due:.....

$$\sqrt{900} = \sqrt{9} \times \sqrt{100} = 30$$

- a Use a calculator to check that the above statement is true.
- b Use a similar routine to find **i**  $\sqrt{400}$  **ii**  $\sqrt{2500}$  **iii**  $\sqrt{1600}$  **iv**  $\sqrt{4900}$
- c Use a calculator to check that each one is correct.
- d Write down the number representing  $\sqrt{1\,000\,000}$
- e Without a calculator, find each of these.  
**i**  $\sqrt{9\,000\,000}$  **ii**  $\sqrt{4\,000\,000}$  **iii**  $\sqrt{81\,000\,000}$  **iv**  $\sqrt{64\,000\,000}$
- f Explain why there is no quick way to find the square roots of thousands. For example:  
 $\sqrt{4000}$  or  $\sqrt{9000}$

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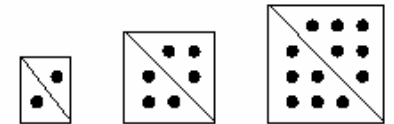
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Home Learning 10.2 Date Due:.....

Look at this arrangement of triangle numbers.  
 Each diagram is made up of a triangle number  
 and a copy of it put on top to make a rectangle.



The size of each rectangle is given by

$$\text{Dots in a row} \times \text{Number of rows}$$

- a Draw the next three shapes in the sequence.
- b Write the size of the shapes you have just drawn.
- c What would be the size of the 50th shape?
- d What is the size of the  $n$ th shape?
- e Try to use this to write down the  $n$ th triangle number.

