

FluidMaths

GCSE Mathematics (Grade 9-1)

Problem Solving

Linear Equations Set 1 (Forming and Solving) Questions

The marks shown are for guidance purposes only

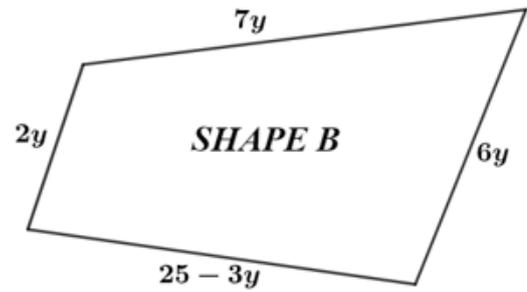
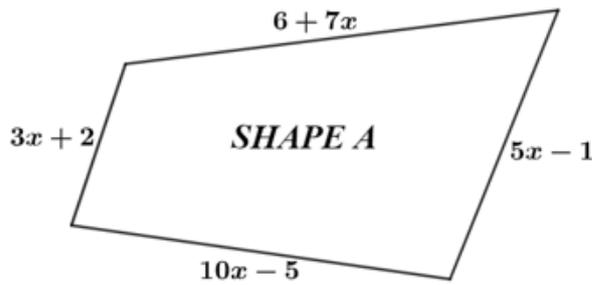
When not specified, round all non-terminating decimals during your calculations to 3 significant figures

Some useful strategies in problem-solving

- Read the question carefully
- Sketch a diagram where applicable
- Take note of key information
- Write down any formulae you may need
- Tackle the problem in bite-size rather than as a whole
- Concentrate on the part of the problem you understand and start from there
- Collaborate with a partner and share ideas
- Use a dictionary to find the meaning of any confusing words
- Check that your answers make sense in the context of the question

<p>1</p>	<p>Here are the prices for food and drink at a fund-raising gala. A plate of food = £5 A glass of juice = £3 £605 was spent on food and drink. Twice as many people ordered drinks as ordered food. How many people went to the gala?</p> <p style="text-align: right;">[5marks]</p>
<p>2</p>	<p>A polo shirt costs 5 times as much as a shorts A retailer can buy 32 more shorts than polo shirts for £800 Calculate the cost of a polo shirt</p> <p style="text-align: right;">[4marks]</p>
<p>3</p>	<p>A pair of jeans cost 4 times more than a shirt. A retailer can buy 30 shirts and 3 pairs of jeans for £84 Calculate the price of a shirt.</p> <p style="text-align: right;">[3marks]</p>
<p>4</p>	<p>Mr. Anderson is 10 times older than his daughter In 32 years, the ratio of their ages will be 2:1 How old is Mr. Anderson?</p> <p style="text-align: right;">[5marks]</p>
<p>5</p>	<p>John is 5 years older than his sister Stacy The ratio of Stacy's age to John's age is 3:7 How old is Stacy? Give your answer in years and months</p> <p style="text-align: right;">[5marks]</p>
<p>6</p>	<p>The sum of three numbers is 24 Two of the numbers are the same The third number is 3 times the sum of the other two Find the three numbers</p> <p style="text-align: right;">[4marks]</p>

7 Here are two shapes.



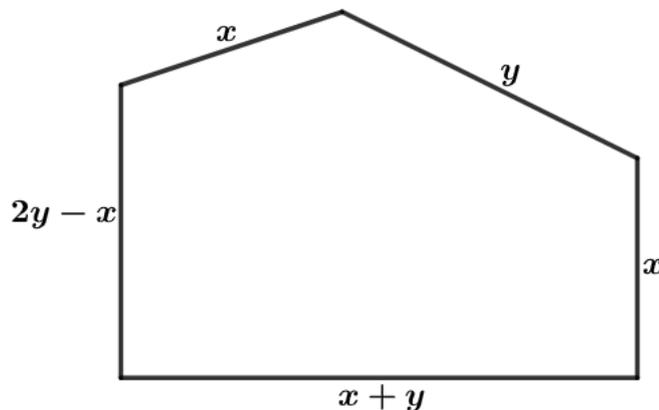
Shape A has a perimeter of 77 cm

Shape B has a perimeter of 91 cm

Calculate the value of the expression xy

[5marks]

8 The perimeter of the pentagon is 70 cm



Given that $y = 2x$, find the values of x and y

[4marks]

9 Leo is 5 years older than his sister Mia.

In 12 years, their combined age will be 4 times their current combined age. How old is Mia? [5marks]

10 Jamie's age is $\frac{2}{3}$ of Harry's age.

4 years ago, Jamie was half of Harry's age.

How old is Harry?

[5marks]