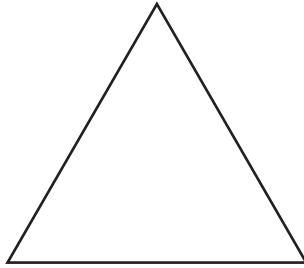


1 Kyle scores 84 marks out of 96 in an examination.

Work out his percentage mark.

Answer % [1]

2



The lengths of each side of this triangle are the same.

(a) Write down the mathematical name for this triangle.

Answer(a) [1]

(b) Write down the number of lines of symmetry for the triangle.

Answer(b) [1]

3 Work out the number of minutes from 18 27 on Tuesday to 03 19 on Wednesday.

Answer min [2]

- 4 Gregor changes \$700 into euros (€) when the rate is €1 = \$1.4131 .

Calculate the amount he receives.

Answer € [2]

5 $w = 3a - 5b$

Calculate w when $a = 2$ and $b = -3$.

Answer $w =$ [2]

- 6 One bracelet costs 85 cents and one necklace costs \$7.50 .

Write down an expression, **in dollars**, for the total cost of b bracelets and n necklaces.

Answer \$ [2]

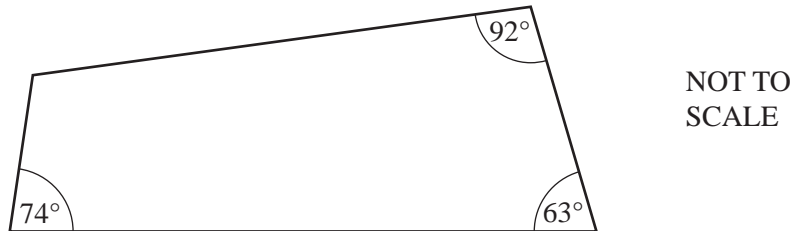
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- 7 (a) A quadrilateral has four sides of equal length and two pairs of equal angles.

Write down the mathematical name for this quadrilateral.

Answer(a) [1]

(b)



Three of the angles in a quadrilateral are 63° , 74° and 92° .

Work out the size of the fourth angle.

Answer(b) [1]

- 8 Solve the equation $4x - 2 = 7$.

Answer $x =$ [2]

- 9 The temperature at the top of a mountain is -12°C .
The temperature at the bottom of the mountain is 18°C .

(a) Work out the difference in these temperatures.

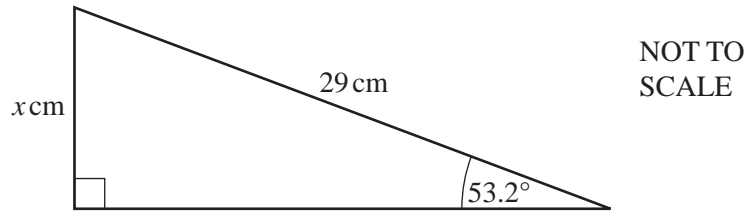
Answer(a) $^\circ\text{C}$ [1]

(b) 18°C is given correct to the nearest degree.

Write down the upper bound for this temperature.

Answer(b) $^\circ\text{C}$ [1]

10



Calculate the value of x .

Answer $x =$ [2]

11 (a) Write down all the factors of 15.

Answer(a) [1]

(b) Factorise completely.

$$15p^2 + 24pt$$

Answer(b) [2]

12 Triangle ABC has sides $AB = 40$ m, $BC = 25$ m and $AC = 35$ m.

Using a scale of 1 cm to represent 5 m, construct triangle ABC .

The construction must be completed using a ruler and compasses only.
All construction arcs must be clearly shown.

Answer



[3]

- 13 Shania invests \$750 at a rate of $2\frac{1}{2}\%$ per year simple interest.
Calculate the **total** amount Shania has after 5 years.

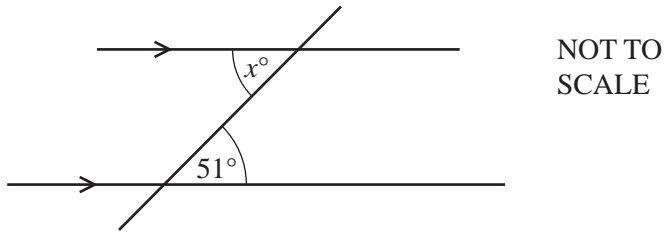
Answer \$ [3]

- 14 **Without using your calculator**, work out $1\frac{5}{6} + \frac{9}{10}$.

You must show your working and give your answer as a mixed number in its simplest form.

Answer [3]

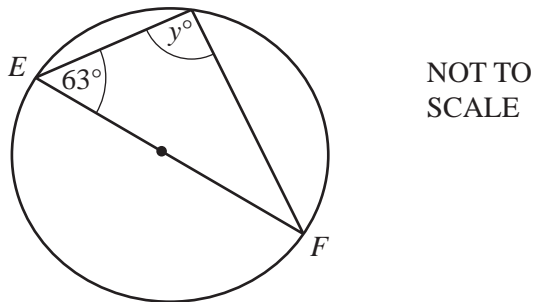
15 (a) Find the value of x .



Answer(a) $x =$ [1]

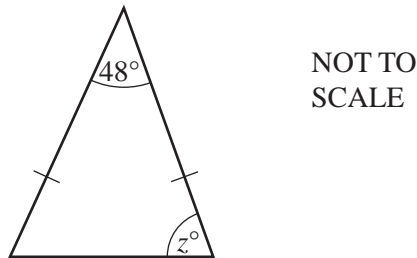
(b) EF is a diameter of the circle.

Find the value of y .



Answer(b) $y =$ [1]

(c) Find the value of z in this isosceles triangle.



Answer(c) $z =$ [1]

16 Solve the simultaneous equations.

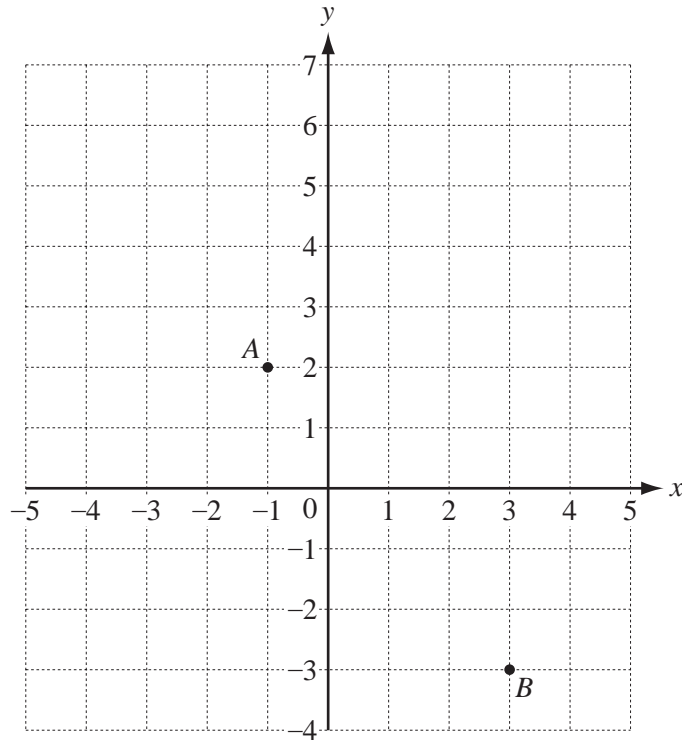
$$3x + 5y = 24$$

$$x + 7y = 56$$

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Answer $x =$

$y =$ [3]



- (a) Write down the co-ordinates of point A .

Answer(a) (..... ,) [1]

- (b) Write \vec{AB} as a column vector.

Answer(b) $\vec{AB} = \begin{pmatrix} \\ \end{pmatrix}$ [1]

- (c) $\vec{AC} = \begin{pmatrix} 2 \\ 3 \end{pmatrix}$

Write down the co-ordinates of C .

Answer(c) (..... ,) [1]

18 (a) Write 326.413 correct to 2 significant figures.

Answer(a) [1]

(b) Find the square root of one million.

Answer(b) [2]

(c) Calculate

$$\frac{64.3 + 7.465}{5.2 - 3.65}$$

Answer(c) [1]

19 (a) Simplify

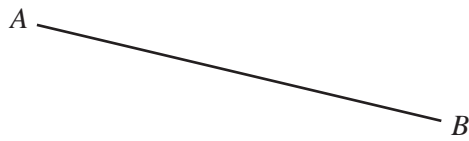
$$4p + 3q + 5p - 7q.$$

Answer(a) [2]

(b) Make x the subject of this formula.

$$g = 2x + y$$

Answer(b) $x =$ [2]



- (a) **Using a straight edge and compasses only**, construct the perpendicular bisector of AB .
Show all your construction arcs. [2]
- (b) Draw the locus of points that are 4 cm from A . [1]
- (c) Shade the region which is less than 4 cm from A and nearer to B than to A . [1]
-

Question 21 is printed on the next page.

21

13 17 13 17 19 13 31 21 29

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(a) For the numbers above, find

(i) the range,

Answer(a)(i) [1]

(ii) the median.

Answer(a)(ii) [2]

(b) Write down the only number in the list which is **not** a prime number.

Answer(b) [1]

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