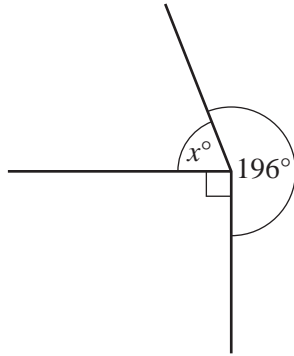




1

NOT TO  
SCALEFind the value of  $x$ .Answer  $x =$  ..... [1]

2 (a) Write down the order of rotational symmetry of this letter.

H

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

(b) Draw the line of symmetry on this letter.

A

[1]

3 Work out.

$$4^3 - \sqrt{49}$$

Answer ..... [2]

4 Simplify.

(a)  $5t - 2t + 4t$

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

(b)  $r^5 \times r^8$

Answer(b) ..... [1]

---

5 Samantha invests \$600 at a rate of 2% per year simple interest.

Calculate the interest Samantha earns in 8 years.

Answer \$ ..... [2]

---

6 Show that  $\left(\frac{1}{10}\right)^2 + \left(\frac{2}{5}\right)^2 = 0.17$ .

Write down all the steps in your working.

Answer

[2]

---

7 Pens cost  $p$  cents and rulers cost  $r$  cents.

Write down an expression, in terms of  $p$  and  $r$ , for the cost of 5 pens and 11 rulers.

Answer ..... cents [2]

---

- 8 Jamie needs 300 g of flour to make 20 cakes.

How much flour does he need to make 12 cakes?

Answer ..... g [2]

---

- 9 Expand the brackets.

$$y(3 - y^3)$$

Answer ..... [2]

---

- 10 Maria pays \$84 rent.  
The rent is increased by 5%.

Calculate Maria's new rent.

Answer \$ ..... [2]

---

- 11 A carton contains 250 ml of juice, correct to the nearest millilitre.

Complete the statement about the amount of juice,  $j$  ml, in the carton.

Answer .....  $\leq j <$  ..... [2]

---

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12

$$\frac{4.7^2 + 19.78}{\sqrt{98}}$$

- (a) Rewrite this calculation with each number written correct to 1 significant figure.

*Answer(a)*

[1]

- (b) Work out the answer to your calculation in **part (a)**.  
Do not use a calculator and show all your working.

*Answer(b)* ..... [1]

13 Factorise completely.

$$4xy + 12yz$$

*Answer* ..... [2]

14

×<sup>R</sup>

T<sup>×</sup>

Using a straight edge and compasses only, construct the locus of points which are equidistant from *R* and from *T*. [2]

15 Find the value of  $\frac{7.2}{11.8 - 10.95}$ .

Give your answer correct to 4 significant figures.

Answer ..... [2]

---

- 16 Calculate the interior angle of a regular pentagon.  
You must show all your working.

Answer ..... [3]

---

- 17 Without using your calculator, work out

$$5\frac{3}{8} - 2\frac{1}{5}$$

Give your answer as a fraction in its lowest terms.  
You must show all your working.

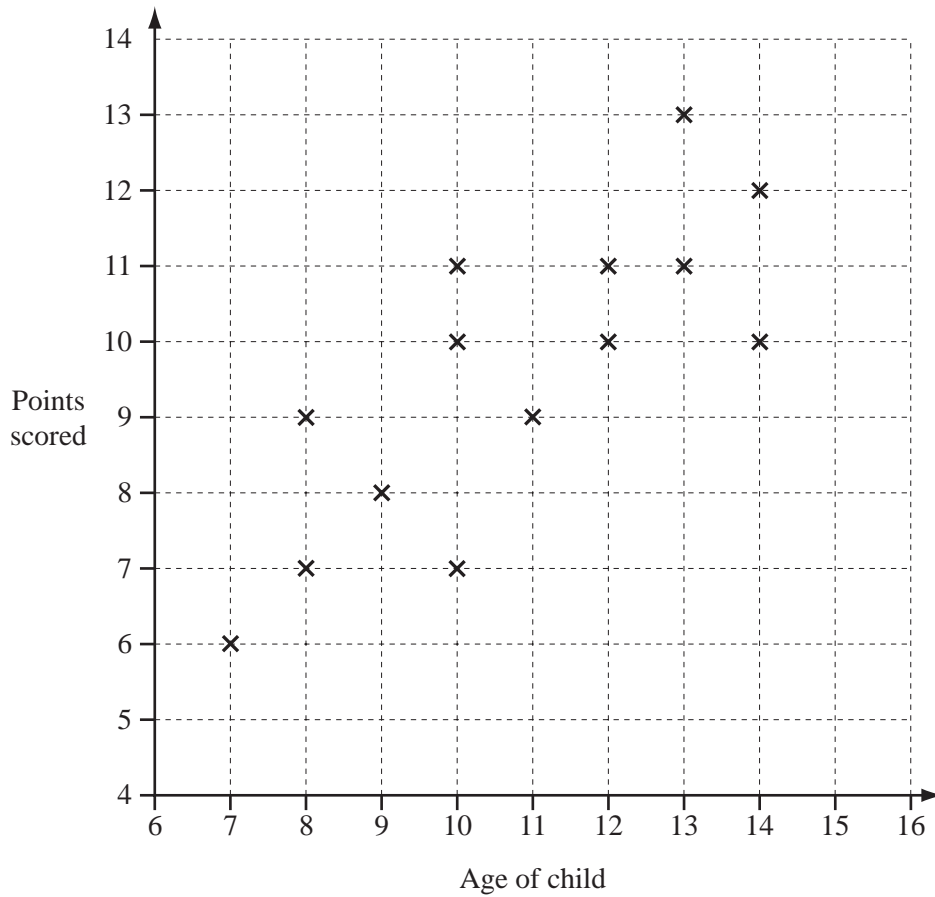
Answer ..... [3]

---

18 14 children played a game.

The age of each child and the number of points they scored are plotted on the scatter diagram.

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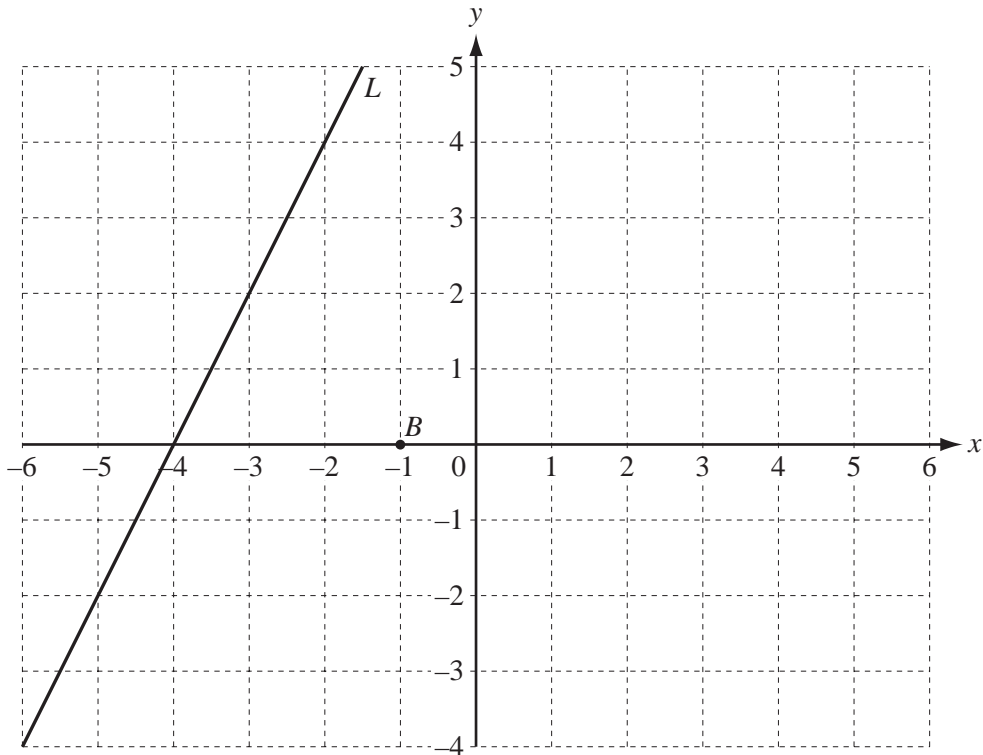
(a) Write down the number of points the child aged 11 scored.

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

(b) Draw a line of best fit on the scatter diagram. [1]

(c) What type of correlation is shown?

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



(a) On the grid mark the point (5, 1). Label it *A*. [1]

(b) Write down the co-ordinates of the point *B*.

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

(c) Find the gradient of the line *L*.

Answer(c) ..... [2]



- 20 (a) The probability that the school bus is late is 0.29.

Write down the probability that the school bus is **not** late.

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

- (b) A fridge contains 12 beef pies, 3 vegetable pies and 5 chicken pies.  
One pie is taken at random from the fridge.

Find the probability that it is

- (i) a vegetable pie,

Answer(b)(i) ..... [1]

- (ii) a beef pie or a vegetable pie,

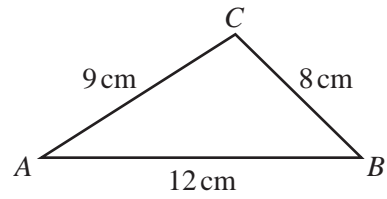
Answer(b)(ii) ..... [1]

- (iii) a lamb pie.

Answer(b)(iii) ..... [1]

---

21

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- (a) (i) Construct an accurate drawing of triangle  $ABC$ .

[2]

- (ii) On your drawing, mark accurately the midpoint of the side  $AB$ .  
Label it  $M$ .

[1]

(b) (i) Sketch the quadrilateral that has

- and
  - and
- opposite sides which are equal in length and parallel
  - opposite angles which are equal
  - diagonals which bisect each other at  $90^\circ$ .

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Examiner's  
Use

[1]

(ii) Write down the mathematical name of this quadrilateral.

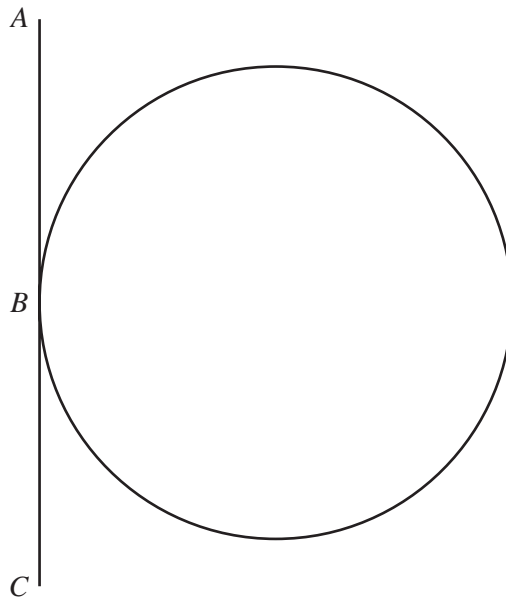
Answer(b)(ii) ..... [1]

---

**Question 22 is printed on the next page.**

22 (a) In the diagram, the line  $AC$  touches the circle at  $B$ .

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(i) Measure the length of the line  $AC$ .

Answer(a)(i)  $AC =$  ..... cm [1]

(ii) Write down the mathematical name for the line  $AC$ .

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

(iii) Mark a point  $D$  on the circumference of the circle. [1]

(b) The diameter of another circle is 3.6 cm.

Calculate the circumference of this circle.

Answer(b) ..... cm [2]

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