

1. Given that  $x$  is a negative integer and that  $x \geq -6$  and that  $x \neq -4$ , list the possible values of  $x$ .

*Answer* ..... [1]

2. Find  $\sqrt{2.89}$ .

*Answer* ..... [1]

3. Solve the equation  $5x + 4 = 7x - 2$

*Answer*  $x =$  ..... [2]

4. Three friends share the cost of an apartment. Xavier pays  $\frac{1}{2}$ , Yvette pays  $\frac{1}{6}$ , and Zoë pays the rest.

- a) Calculate the fraction of rent that Zoë pays.

*Answer* ..... [1]

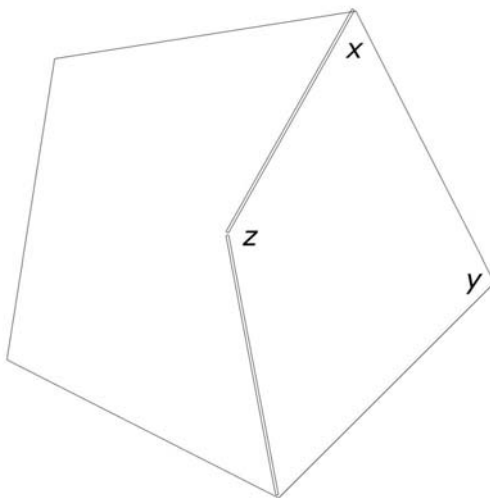
- b) If Yvette pays \$50 of the rent, calculate the total cost of renting the apartment.

*Answer* \$..... [1]

5. If  $x = 3$ , work out the value of,  $4x^2 - x^3$ .

Answer ..... [1]

6. The diagram below shows a regular pentagon.



Answer  $x =$  ..... [1]

$y =$  ..... [1]

$z =$  ..... [2]

7. a) Write down the value of cosine  $36^\circ$ , correct to three decimal places.

Answer ..... [1]

b) Write down the value of the angle whose sine is 0.985, giving your answer correct to the nearest degree.

Answer .....  $^\circ$  [1]

8. It is said that the mean average weight of a South African rugby player is 98 kg.

Find the weight of a team of fifteen players and give your answer in standard form.

*Answer* ..... [2]

9. Using a straight edge and compasses only, construct accurately the locus of the points which are equidistant from the two points *A* and *B*.

*A*•

•*B*

[2]

10. Find the missing number in each of these sequences.

a) 1, 4, 9, 16, 25, ..... , 49, 64

*Answer* ..... [1]

b) 21, 14, 6, -3, ..... , -24, -36

*Answer* ..... [1]

11. The number of people attending a demonstration was 56,000 correct to the nearest thousand.

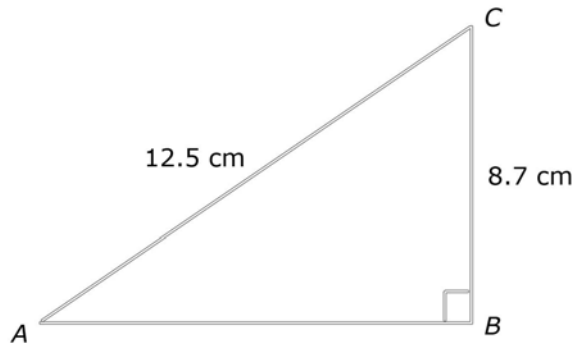
Complete the inequality in the answer space.

*Answer* .....  $\leq$  people  $<$  ..... [2]

12. Find the area of a quarter of a circle, whose radius is 7 cm.

*Answer* ..... cm<sup>2</sup> [3]

13. The diagram below shows a right angled triangle,  $ABC$ .



NOT TO SCALE

Calculate the length of  $AB$ .

*Answer* ..... cm [3]

14. Last year Simone paid \$2400 for a motorbike and one year later she sold it for \$1800.

Calculate the percentage depreciation on her motorbike.

*Answer* ..... % [3]

Answers

1. -6, -5, -3, -2, -1

2. 1.7 (or -1.7)

3.  $x = 3$

4. a)  $\frac{1}{3}$                       b) \$300

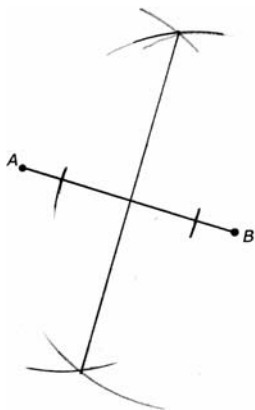
5. 9

6.  $x = 54^\circ$   
 $x = 108^\circ$   
 $z = 144^\circ$

7. a) 0.809                      b)  $80^\circ$

8.  $1.47 \times 10^3$

9.



10. a) 36                      b) -13

11.  $55500 \leq \textit{people} < 56500$

12.  $38.5 \text{ cm}^2$

13. 8.98 cm

14. 25%