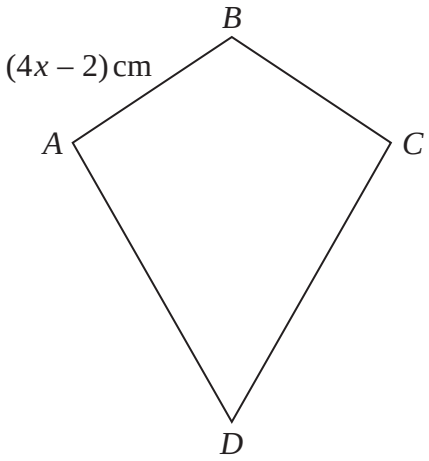
**1** *ABCD* is a kite.




$AB = (4x - 2)\,\text{cm}$

Jasper says that $x$ could be 0.5

(a) Explain why Jasper cannot be correct.

.....

.....

.....

**(1)**

$AD = 3AB$
The kite has a perimeter of 64 cm.

(b) Find the value of $x$.

$x =$.....

**(3)**

**(Total for Question 1 is 4 marks)**

**2** Jenna measures all the angles around a point.

Her results are 23°, 145°, 23° and 69°

Explain why these results cannot be true.

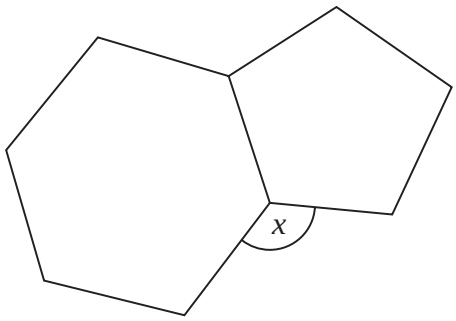
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**(Total for Question 2 is 1 mark)**

**3** Here is a regular hexagon and a regular pentagon.

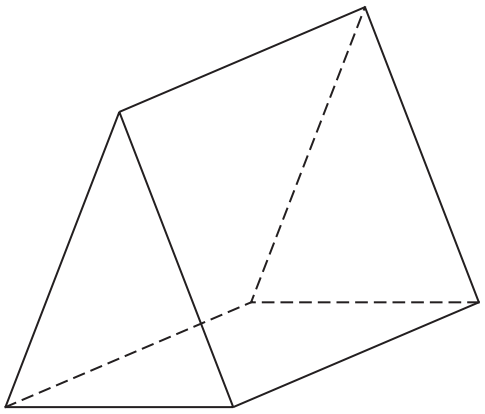



Work out the size of the angle marked $x$.
You must show all your working.

.....°

**(Total for Question 3 is 3 marks)**

**4** The diagram shows a solid triangular prism.



(a) Write down the number of faces of the prism.

.....

**(1)**

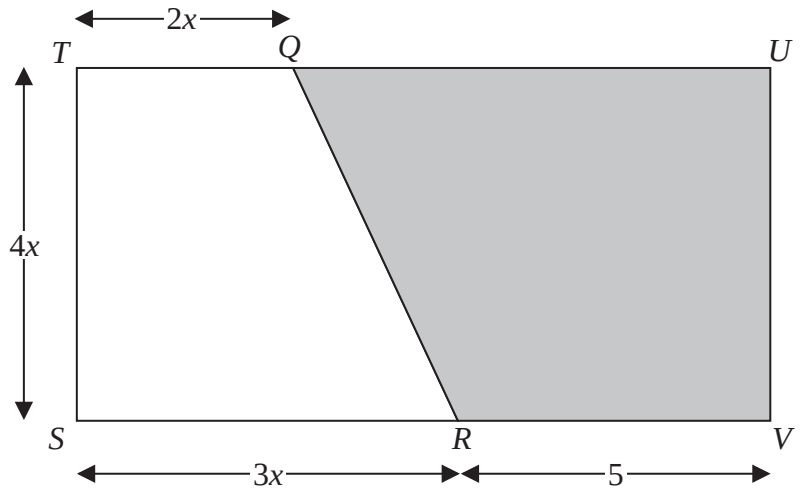
(b) Write down the number of edges of the prism.

.....

**(1)**

**(Total for Question 4 is 2 marks)**

**5** The diagram shows rectangle *STUV*.
*TQU* and *SRV* are straight lines.
All measurements are in cm.



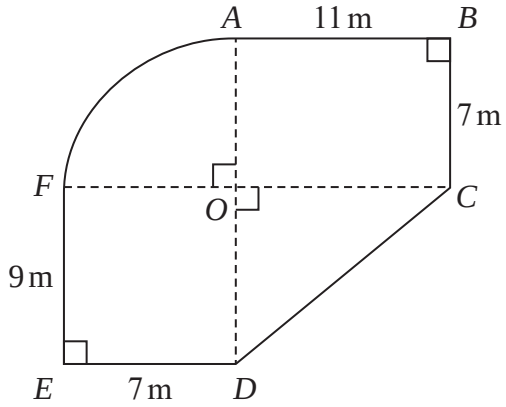

The area of trapezium *QUVR* is $A\,\text{cm}^2$

Show that $A = 2x^2 + 20x$

**(Total for Question 5 is 3 marks)**

**6** The diagram shows a plan of Jason's garden.

*ABCO* and *DEFO* are rectangles.
*CDO* is a right-angled triangle.
*AFO* is a sector of a circle with centre *O* and angle *AOF* = 90°



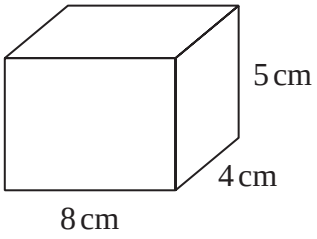

Jason is going to cover his garden with grass seed.
Each bag of grass seed covers 14 $m^2$ of garden.
Each bag of grass seed costs £10.95

Work out how much it will cost Jason to buy all the bags of grass seed he needs.

£.....

**(Total for Question 6 is 5 marks)**

**7** Here is a cuboid.

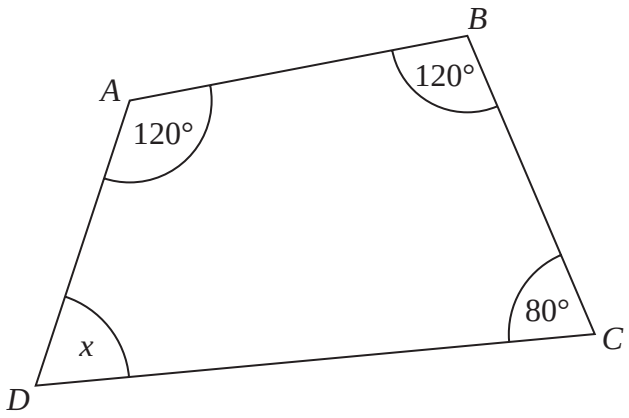



Work out the volume of the cuboid.

..... $cm^3$

**(Total for Question 7 is 2 marks)**

**8** *ABCD* is a quadrilateral.




(a) (i) Work out the size of angle *x*.

.....°

**(1)**

(ii) Give a reason for your answer.

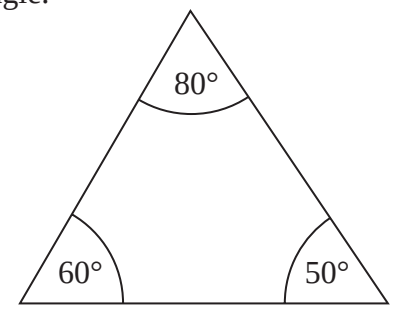
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**(1)**

The diagram below shows a triangle.




The diagram is wrong.

(b) Explain why.

.....

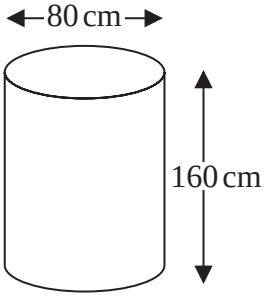
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**(1)**

**(Total for Question 8 is 3 marks)**

**9** Karina has 4 tanks on her tractor.
Each tank is a cylinder with diameter 80 cm and height 160 cm.




The 4 tanks are to be filled completely with a mixture of fertiliser and water.

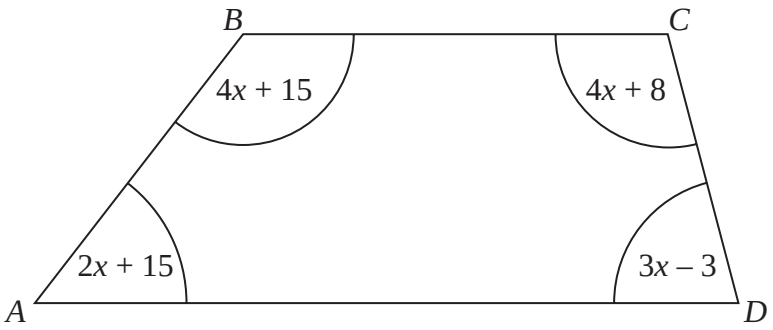
The fertiliser has to be mixed with water in the ratio 1 : 100 by volume.
Karina has 32 litres of fertiliser.

1 litre = 1000 $cm^3$

Has Karina enough fertiliser for the 4 tanks?
You must show how you get your answer.

**(Total for Question 9 is 4 marks)**

**10** *ABCD* is a quadrilateral.




All angles are measured in degrees.

Show that *ABCD* is a trapezium.

**(Total for Question 10 is 4 marks)**