

Geometry 1F Assessment

THE ANSWERS

Foundation Level



All questions

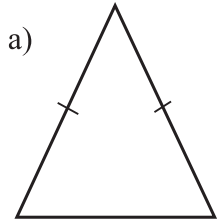
Clip	Grade	Title of clip	Question(s)	Marked out of	Score	%
9.....	1.....	Simple Geometric Definitions	1	4	___	___
10.....	1.....	Polygons.	2, 3	5	___	___
11.....	1.....	Symmetries	4	6	___	___
12.....	1.....	Tessellations and Congruency	5, 6	5	___	___
13.....	1.....	Names of Angles	7	2	___	___
43.....	2.....	Properties of Solids.	8	5	___	___
44.....	2.....	Nets	9	3	___	___
45.....	2.....	Angles on a Line and at a Point.	10	4	___	___
46.....	2.....	Measuring and Drawing Angles	11	2	___	___
47.....	2.....	Drawing a Triangle Using a Protractor	12	3	___	___
48.....	2.....	Reflections	13	2	___	___
49.....	2.....	Rotations	13	2	___	___
50.....	2.....	Translations	13	2	___	___
51.....	2.....	Plans and Elevations	14	4	___	___
52.....	2.....	Perimeters	15	3	___	___
53.....	2.....	Area of a Rectangle.	16	4	___	___
54.....	2.....	Area of a Triangle	17	4	___	___
55.....	2.....	Area of a Parallelogram.	18	2	___	___
56.....	2.....	Area of a Trapezium	19	2	___	___
112.....	3.....	Metric Conversions.	20	3	___	___
113.....	3.....	Problems on Coordinate Axes	21	3	___	___
114.....	3.....	Surface Area of a Prism.	22	6	___	___
115.....	3.....	Volume of a Cuboid	23	2	___	___
116.....	3.....	Circle Definitions.	24	2	___	___

Out of 80

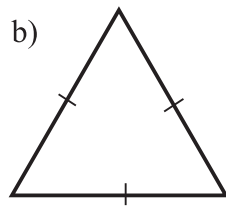
TOTAL SCORE _____

Final Percentage %

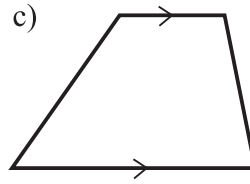
1) Name each of the following shapes:



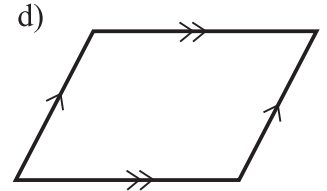
Isosceles triangle 1



Equilateral triangle 1

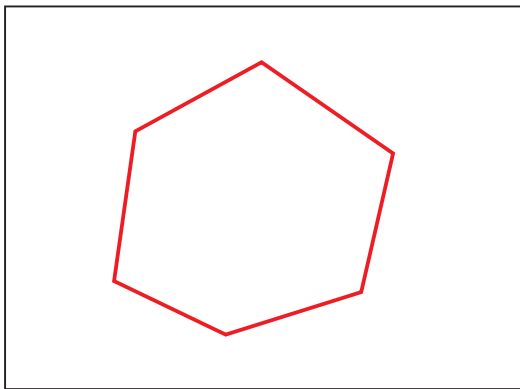


Trapezium 1

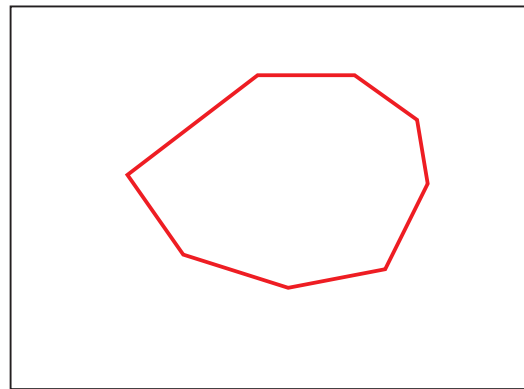


Parallelogram 1

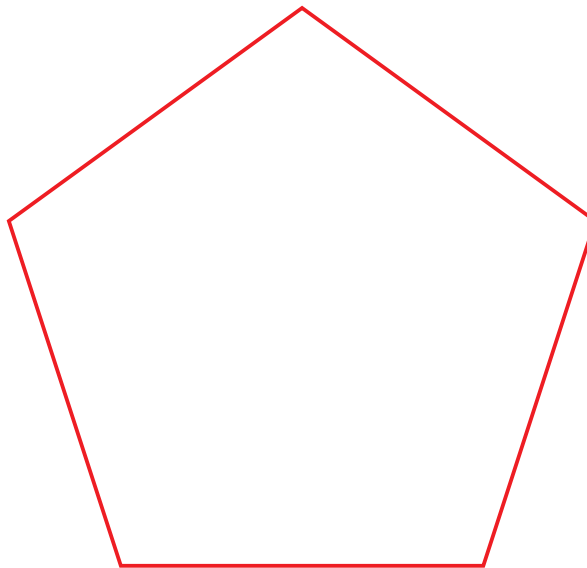
2) a) In the box, below, draw a hexagon. 1



b) In the box, below, draw an octagon. 1

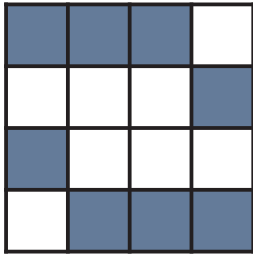


3) a) In the space, below, draw a sketch of a **regular** pentagon. 2

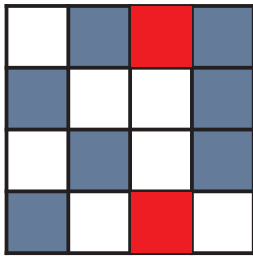


b) In a regular pentagon, what is special about the angles? They are all equal. 1

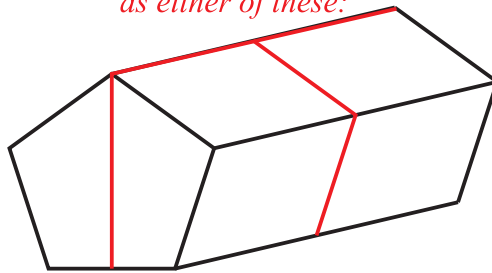
4) a) What is the order of rotational symmetry of this shape? 2 2



b) Shade exactly **two** squares to make this shape have **one** line of symmetry. 2

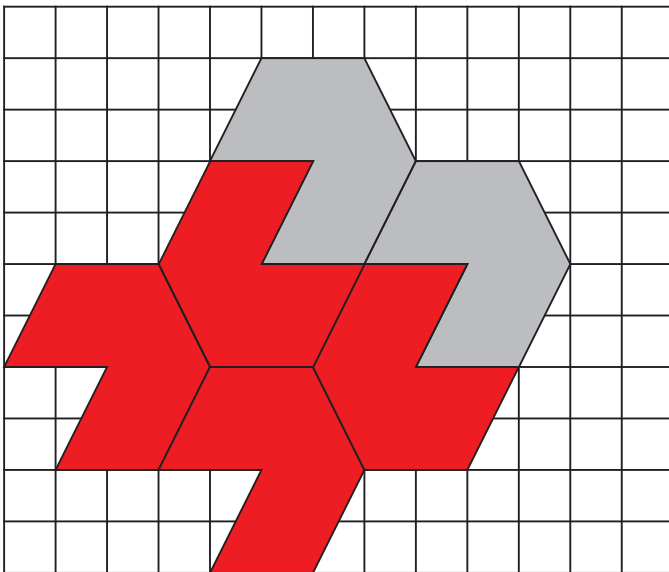


Any correct answer such as either of these:



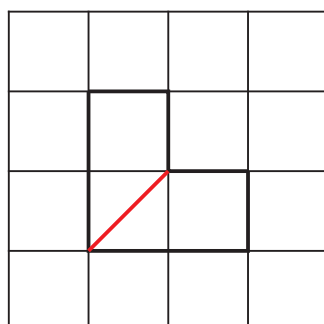
c) Draw one plane of symmetry on this shape. 2

5) This pattern shows part of a tessellation.

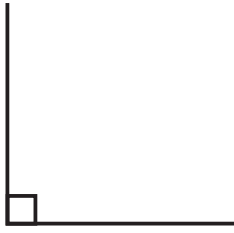


Extend the tessellation by drawing four more unit shapes within the grid. 3

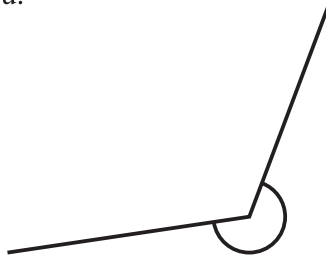
6) Draw one straight line on the L-shape to make two congruent shapes. 2



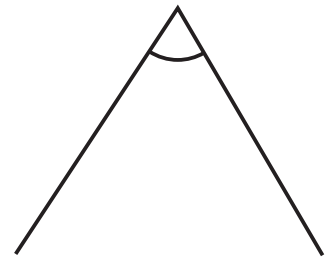
- 7) What type of angles are shown, below?
The first one has been done for you.



Right angle



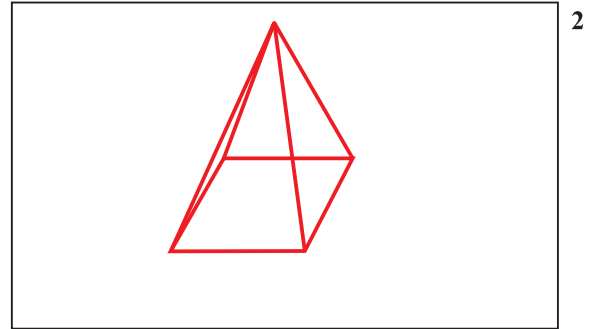
a) Reflex angle 1



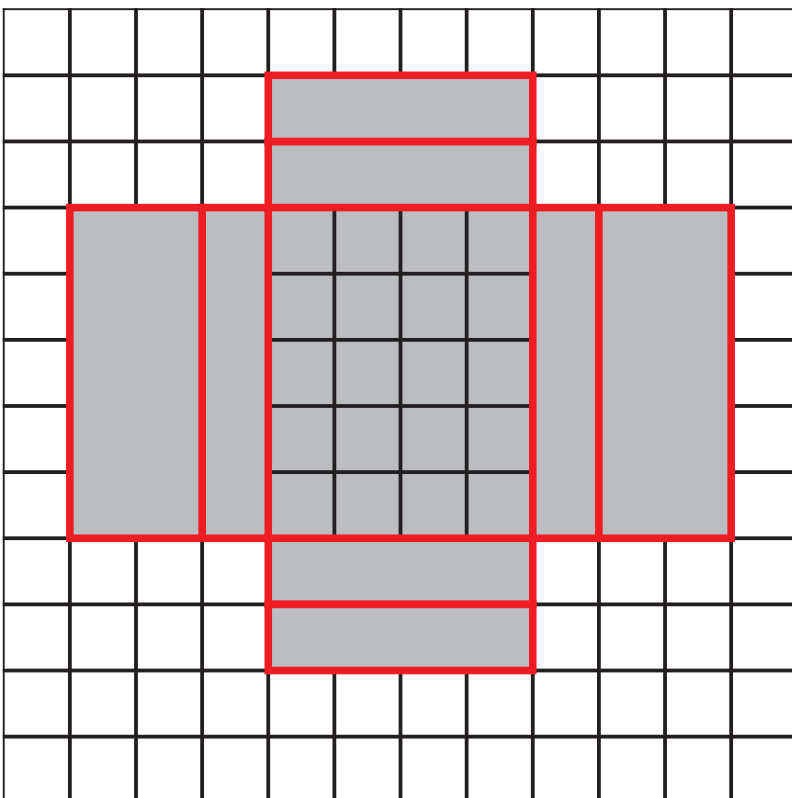
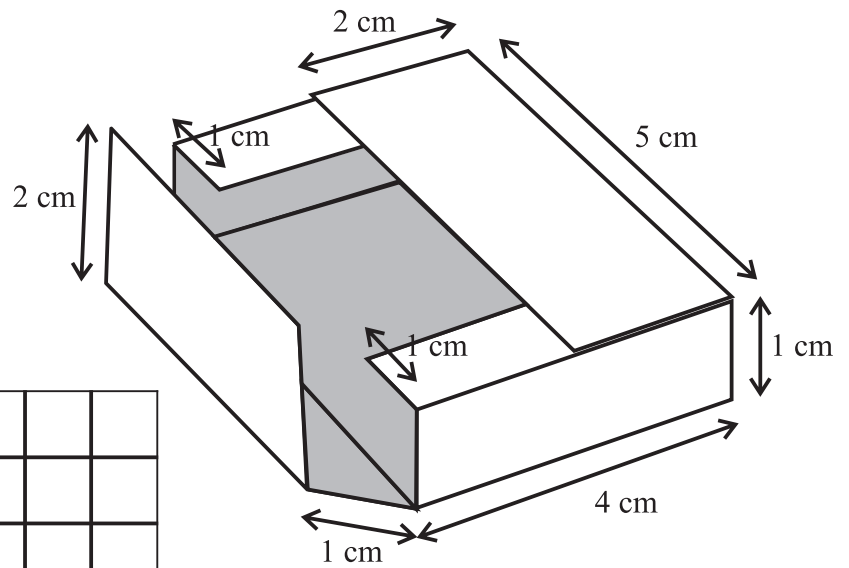
b) Acute angle 1

- 8) a) Sketch a square-based pyramid in this box →
- b) Fill in the table, below, to say how many faces, edges and vertices a cube has. 3

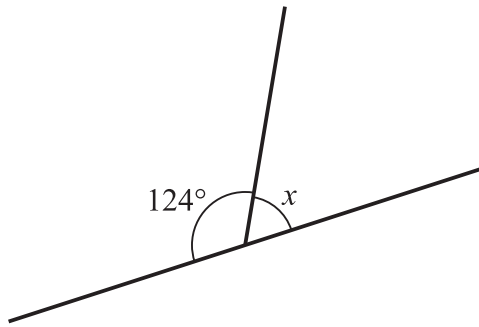
	Faces	Edges	Vertices
Cube	6	12	8



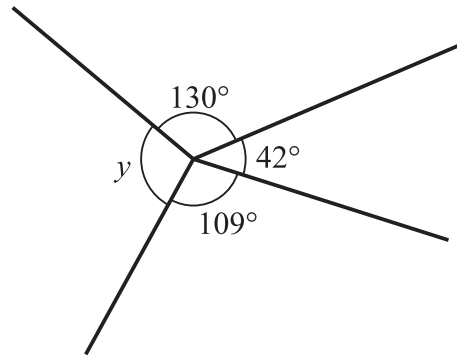
- 9) The diagram shows a box →
- Complete the net for the box. 3



10) Work out the size of angles x and y .

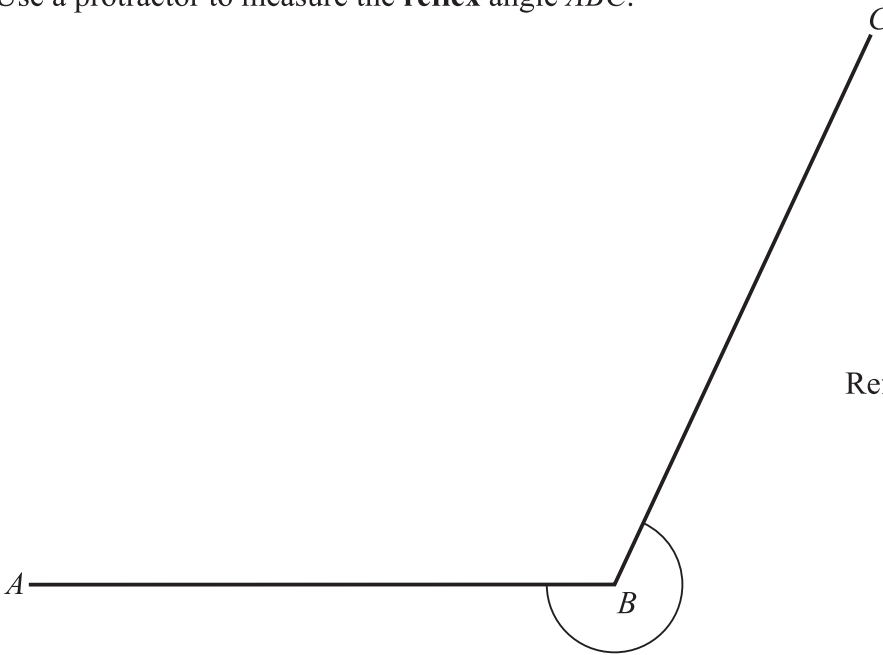


$x = \underline{56}^\circ$ 2



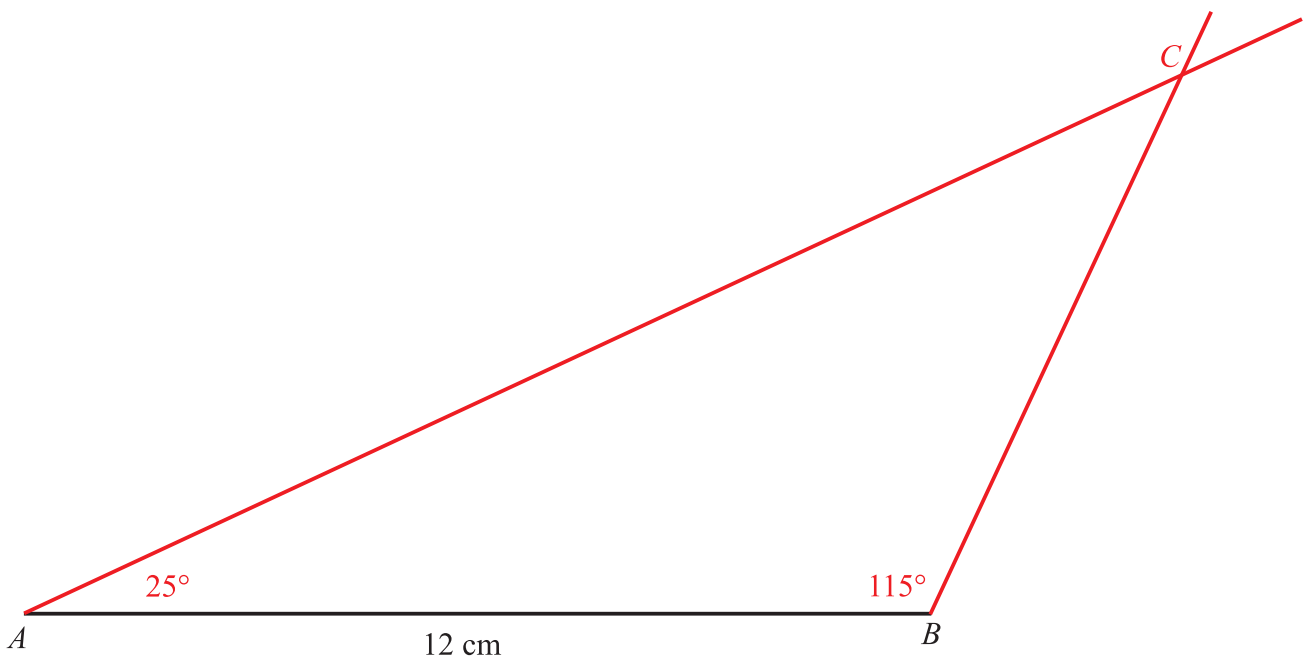
$y = \underline{79}^\circ$ 2

11) Use a protractor to measure the **reflex** angle ABC .

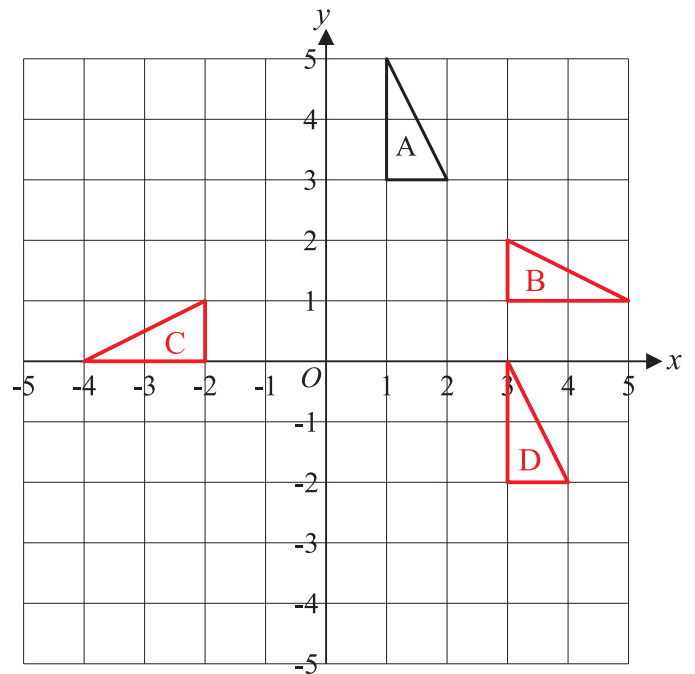


Reflex angle ABC is $\underline{245}^\circ$ 2

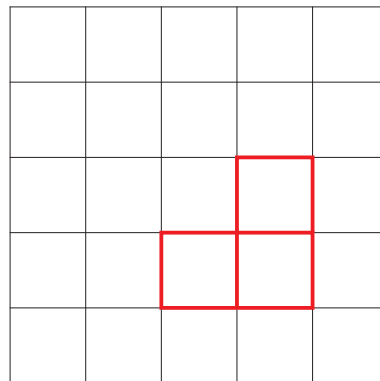
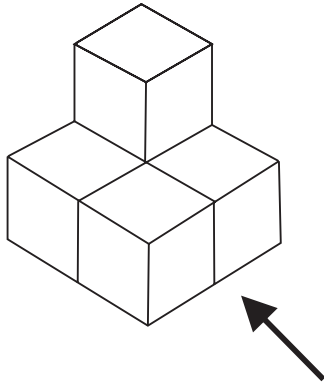
12) Draw triangle ABC where AB is 12 cm, angle ABC is 115° and angle BAC is 25° .
Line AB has been drawn for you. 3



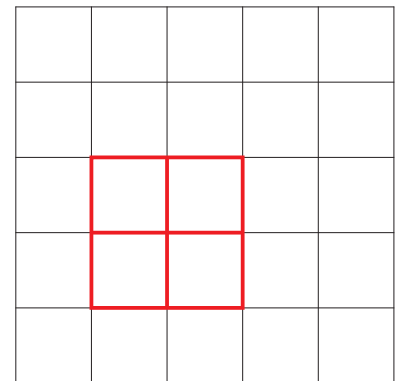
- 13) a) Reflect triangle A in the line $y = x$ and label it B. 2
 b) Rotate triangle A 90° anti-clockwise centre (1, 0) and label it C. 2
 c) Translate triangle A by vector $\begin{bmatrix} 2 \\ -5 \end{bmatrix}$ and label it D. 2



- 14) This solid object is made from five identical cm square cubes.

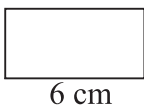


Elevation

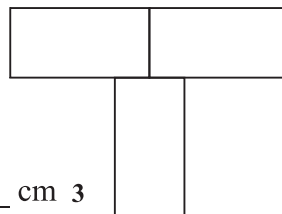


Plan

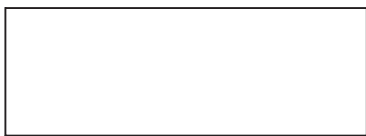
- a) Draw the elevation of the object on the cm square grid from the direction marked with the arrow. 2
 b) Draw the plan of the solid object on the cm square grid. 2

- 15) Three rectangles like this  3 cm
 6 cm

are put together to make this shape. \longrightarrow



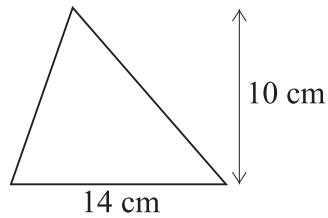
What is the perimeter of the shape? 42 cm 3

- 16) a) What is the area of this rectangle? 24 cm^2 2  3 cm
 8 cm

- b) If a rectangle has an area of 90 cm^2 and a length of 20 cm, what is the width of the rectangle? 4.5 cm 2

17) a) Find the area of this triangle

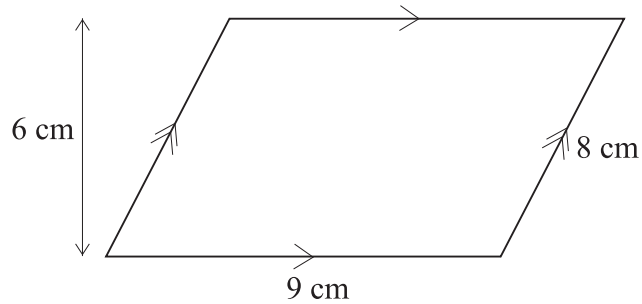
Area is 70 cm^2 2



b) If the base of a triangle has a length of 12 cm and an area of 60 cm^2 what is its height? 10 cm 2

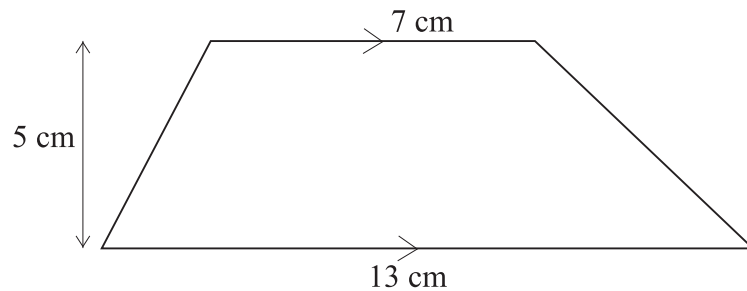
18) Find the area of this parallelogram.

Area is 54 cm^2 2



19) Find the area of this trapezium.

Area is 50 cm^2 2



20) a) Change 405 cm to metres. 4.05 m 1

b) Change 2.3 kg to grams. 2300 g 1

c) Change 4560 cm^3 to litres. 4.56 l 1

21) The diagram shows three vertices of a parallelogram.

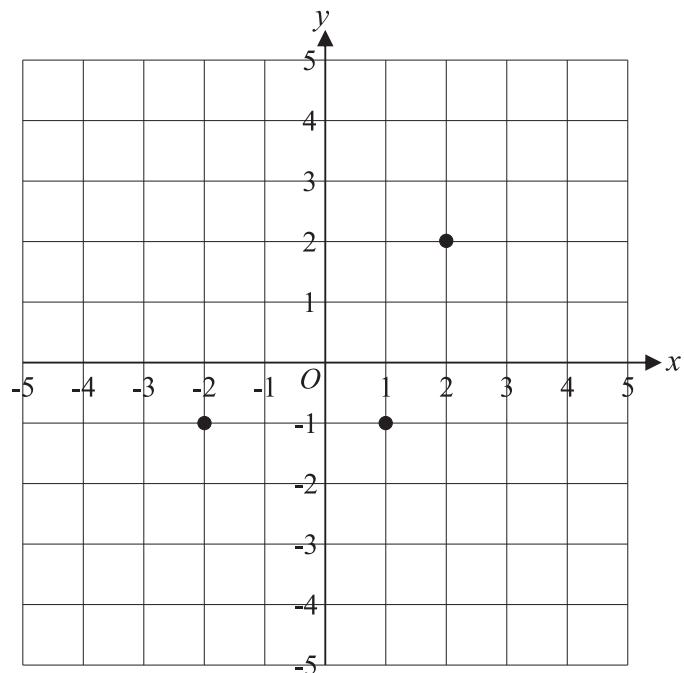
The fourth vertex can be in one of three possible places.

What are the coordinates of the three places?

Possibility 1: (5, 2) 1

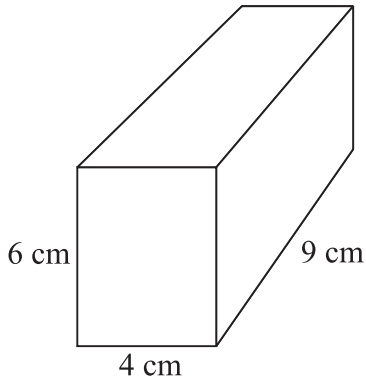
Possibility 2: (-1, 2) 1

Possibility 3: (-3, -4) 1



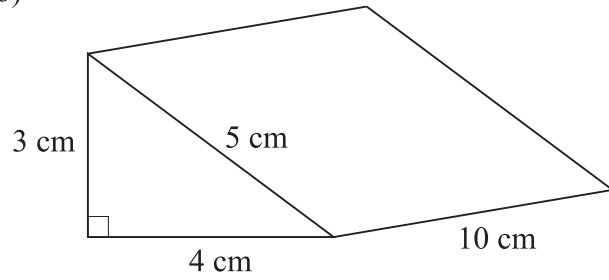
22) Below you will see a cuboid and a triangular prism.
Find the total surface area of each of them.

a)



Total surface area = 228 cm² 3

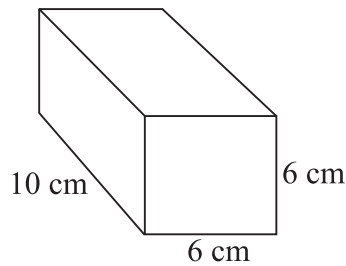
b)



Total surface area = 132 cm² 3

23) What is the volume of this cuboid?

Volume is 360 cm³ 2



24) Fill in the blanks

a) Line A is a radius of the circle. 1

b) Line B is a chord of the circle. 1

