



Name: _____

Pre-assessment mark:

Pre-assessment level:

Question 1

ACMMG195 - Level 8

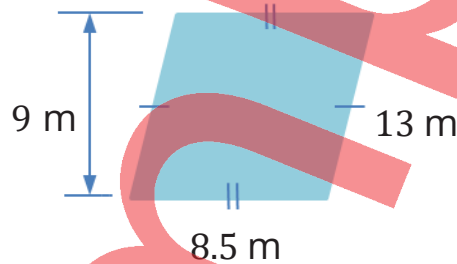
Convert the volume given to the unit of measurement shown.

$$3760 \text{ mm}^3 = \boxed{} \text{ cm}^3$$

Question 2

ACMMG196 - Level 8

What is the perimeter of this parallelogram?



30.5 m

43 m

39 m

35 m

Question 3

ACMMG197 - Level 8

Which is the circumference of this circle, correct to 1 decimal place?

8 cm

12.6 cm

25.1 cm

50.3 cm

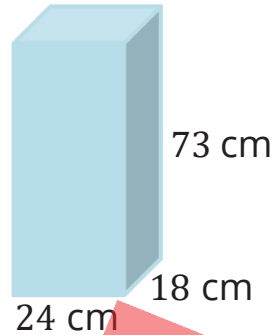
100.5 cm



Question 4

ACMMG198 - Level 8

Calculate the volume of this rectangular prism.



volume = cm³

Question 5

ACMMG199 - Level 8

The flight leaves at 10:15 and takes 230 minutes. At approximately what time will the flight land?



01:00

12:00

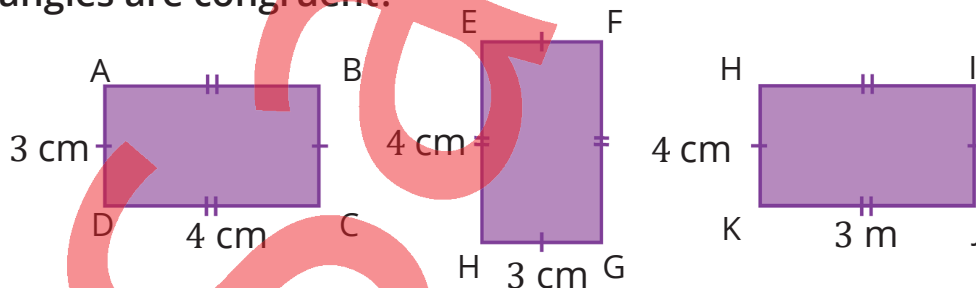
13:00

14:00

Question 6

ACMMG200 - Level 8

Which rectangles are congruent?



$ABCD \equiv EFGH$

$ABCD \equiv HIJK$

$ABCD \equiv HBFC$

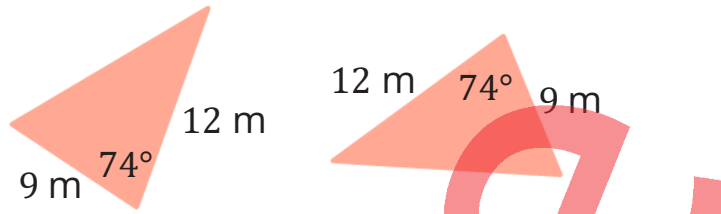
$EFGH \equiv HIJK$



Question 7

ACMMG201 - Level 8

Which condition identifies this pair of triangles as congruent?



SSS

RHS

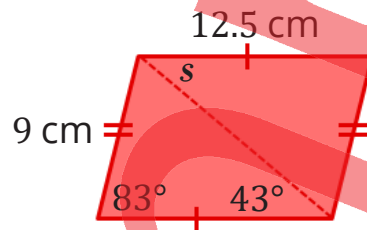
AAS

SAS

Question 8

ACMMG202 - Level 8

Calculate the value of the pronumeral in this parallelogram.

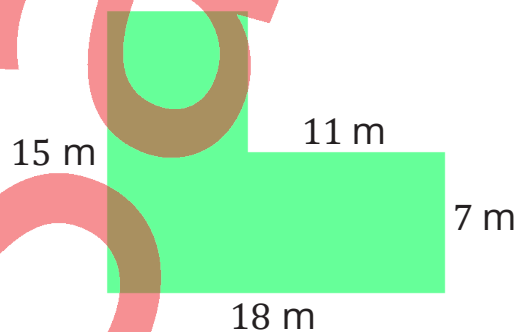


$s =$ $^{\circ}$

Question 9

ACMMG216 - Level 9

What is the area of this shape?



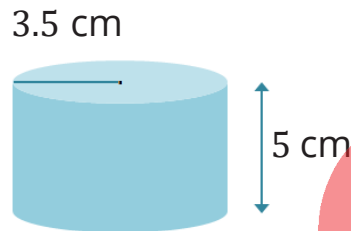
area = m^2



Question 10

ACMMG217 - Level 9

What is the volume of this cylinder, correct to 2 decimal places?



219.91 cm³

109.96 cm³

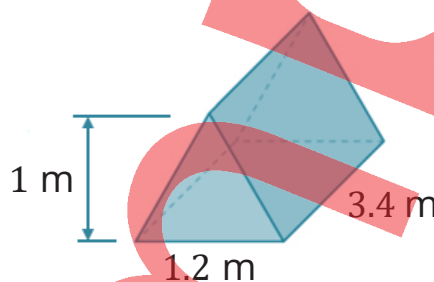
769.69 cm³

192.42 cm³

Question 11

ACMMG218 - Level 9

What is the volume of this prism?



volume = m³

Question 12

ACMMG219 - Level 9

The distance from the Sun to Mars is 227.9 million kilometres. The distance from the Sun to Jupiter is 778.5 million kilometres. Which measurement is the distance from Jupiter to Mars?



2.28×10^8 km

1.01×10^9 km

7.79×10^8 km

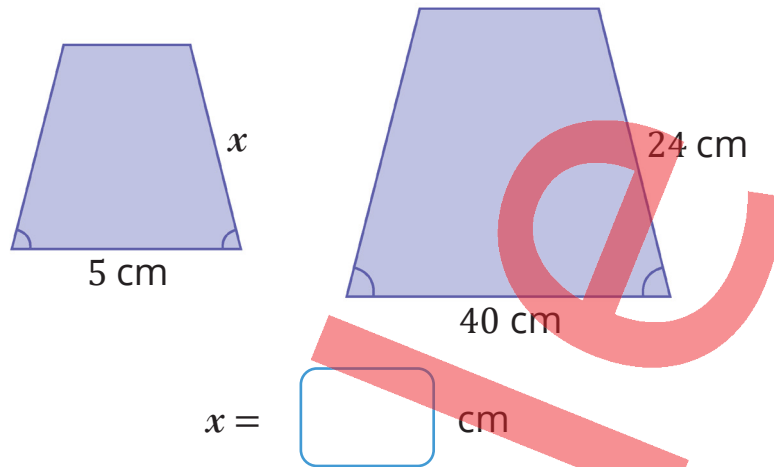
5.51×10^8 km



Question 13

ACMMG220 - Level 9

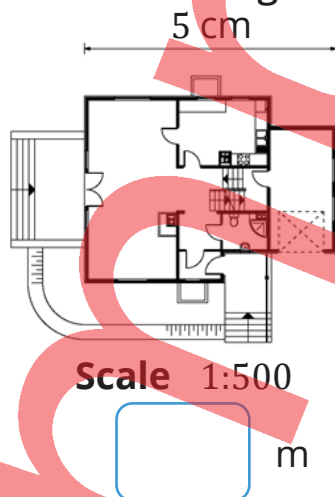
What is the value of x ?



Question 14

ACMMG221 - Level 9

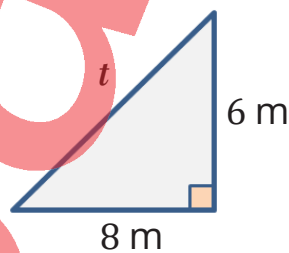
The scale of this house plan is 1:500. How long is the 5 cm side in real life?



Question 15

ACMMG222 - Level 9

What is the length of the side labelled t ?



100 m

10 m

28 m

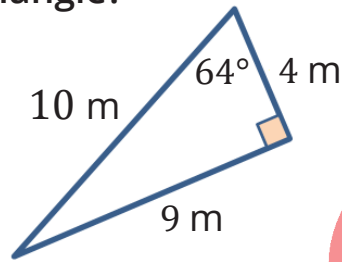
14 m



Question 16

ACMMG223 - Level 9

What is the sine ratio for this triangle?



$$\sin 64^\circ = \frac{9}{4}$$

$$\sin 64^\circ = \frac{9}{10}$$

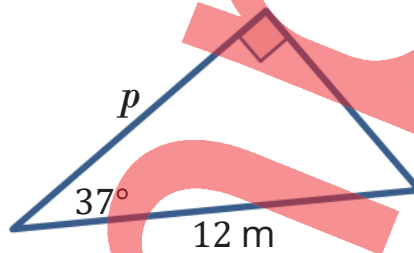
$$\sin 64^\circ = \frac{4}{10}$$

$$\sin 64^\circ = \frac{10}{9}$$

Question 17

ACMMG224 - Level 9

What is the length of p ?



9.04 m

15.01 m

9.58 m

7.22 m



Teacher reference

* 1 mark for each correct answer

Question	Sub-Strand	Australian Curriculum	Content Description
1	Using Units of Measurement	Level 8	Choose appropriate units of measurement for area and volume and convert from one unit to another (ACMMG195)
2	Using Units of Measurement	Level 8	Find perimeters and areas of parallelograms, trapeziums, rhombuses and kites (ACMMG196)
3	Using Units of Measurement	Level 8	Investigate the relationship between features of circles such as circumference, area, radius and diameter. Use formulas to solve problems involving circumference and area (ACMMG197)
4	Using Units of Measurement	Level 8	Develop the formulas for volumes of rectangular and triangular prisms and prisms in general. Use formulas to solve problems involving volume (ACMMG198)
5	Using Units of Measurement	Level 8	Solve problems involving duration, including using 12- and 24-hour time within a single time zone (ACMMG199)
6	Geometric Reasoning	Level 8	Define congruence of plane shapes using transformations (ACMMG200)
7	Geometric Reasoning	Level 8	Develop the conditions for congruence of triangles (ACMMG201)
8	Geometric Reasoning	Level 8	Establish properties of quadrilaterals using congruent triangles and angle properties, and solve related numerical problems using reasoning (ACMMG202)
9	Using Units of Measurement	Level 9	Calculate the areas of composite shapes (ACMMG216)
10	Using Units of Measurement	Level 9	Calculate the surface area and volume of cylinders and solve related problems (ACMMG217)
11	Using Units of Measurement	Level 9	Solve problems involving the surface area and volume of right prisms (ACMMG218)
12	Using Units of Measurement	Level 9	Investigate very small and very large time scales and intervals (ACMMG219)
13	Geometric Reasoning	Level 9	Use the enlargement transformation to explain similarity and develop the conditions for triangles to be similar (ACMMG220)
14	Geometric Reasoning	Level 9	Solve problems using ratio and scale factors in similar figures (ACMMG221)
15	Pythagoras and Trigonometry	Level 9	Investigate Pythagoras' Theorem and its application to solving simple problems involving right angled triangles (ACMMG222)
16	Pythagoras and Trigonometry	Level 9	Use similarity to investigate the constancy of the sine, cosine and tangent ratios for a given angle in right-angled triangles (ACMMG223)
17	Pythagoras and Trigonometry	Level 9	Apply trigonometry to solve right-angled triangle problems (ACMMG224)



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