



Student Name _____

Eastern Goldfields College **Mathematics Essential 2019**

Test 3 - Weighting 8%

Working Time: 20 minutes

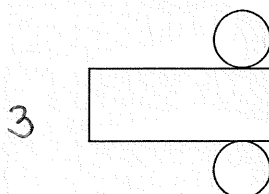
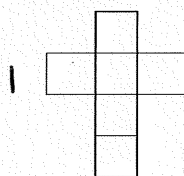
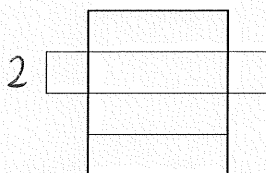
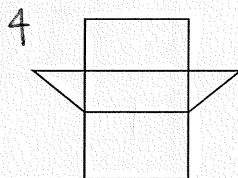
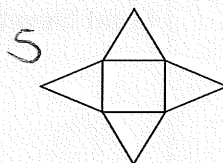
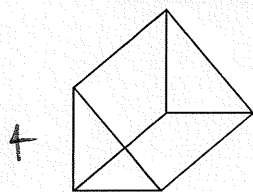
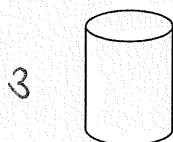
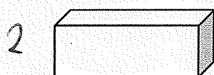
Marks: 19 marks

Calculator Free

(No notes or calculator allowed)

Question 1 (2 marks)

Match each shape to its net

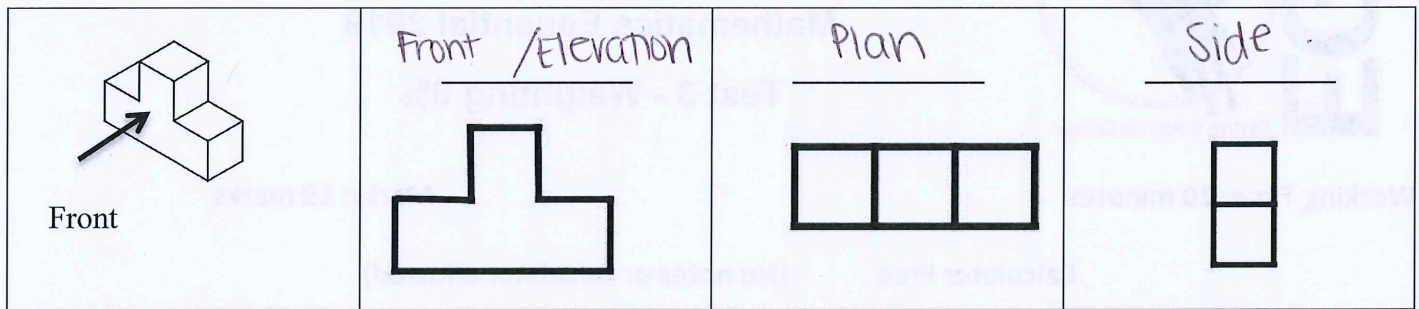


✓✓ All correct

✓ 3+ correct

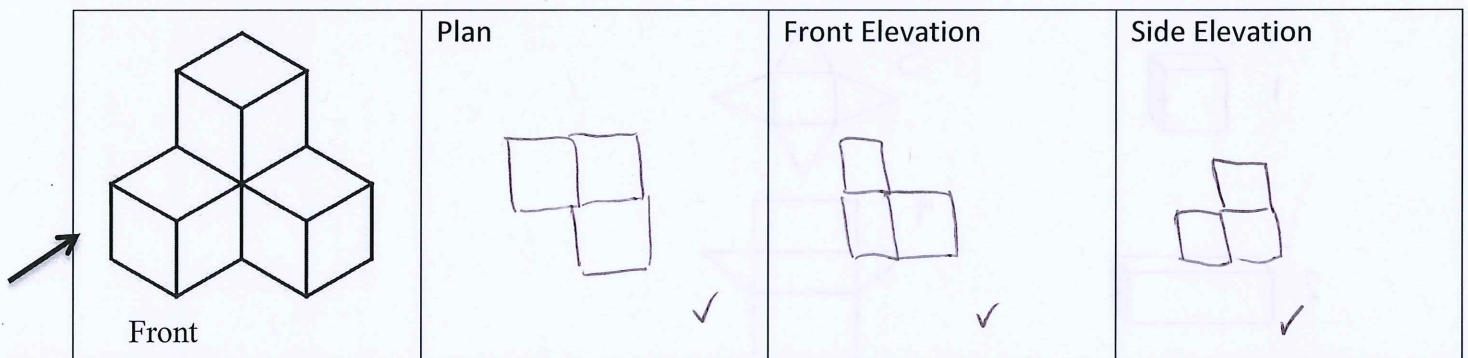
Question 2 (4 marks – 1,3)

a) Label the different views for the following 3D shape.



✓ All correct

b) Draw the shape in its different views.



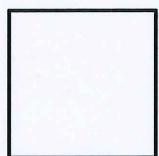
Question 3 (3 marks)

On a scale of 1:30 what measurements on a plan would represent actual measurements of

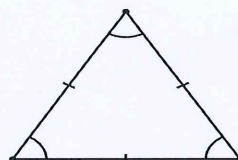
- a) 120cm 4cm ✓
- b) 45cm 1.5cm ✓
- c) 360cm 12cm ✓

Question 4 (4 marks)

State two (2) properties of the following shapes



4 x right angles ✓
4 x same side length ✓
Square

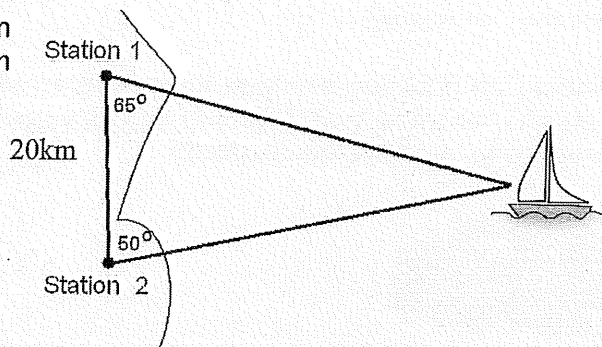


3 equal angles ✓
3 equal sides ✓
equilateral triangle.

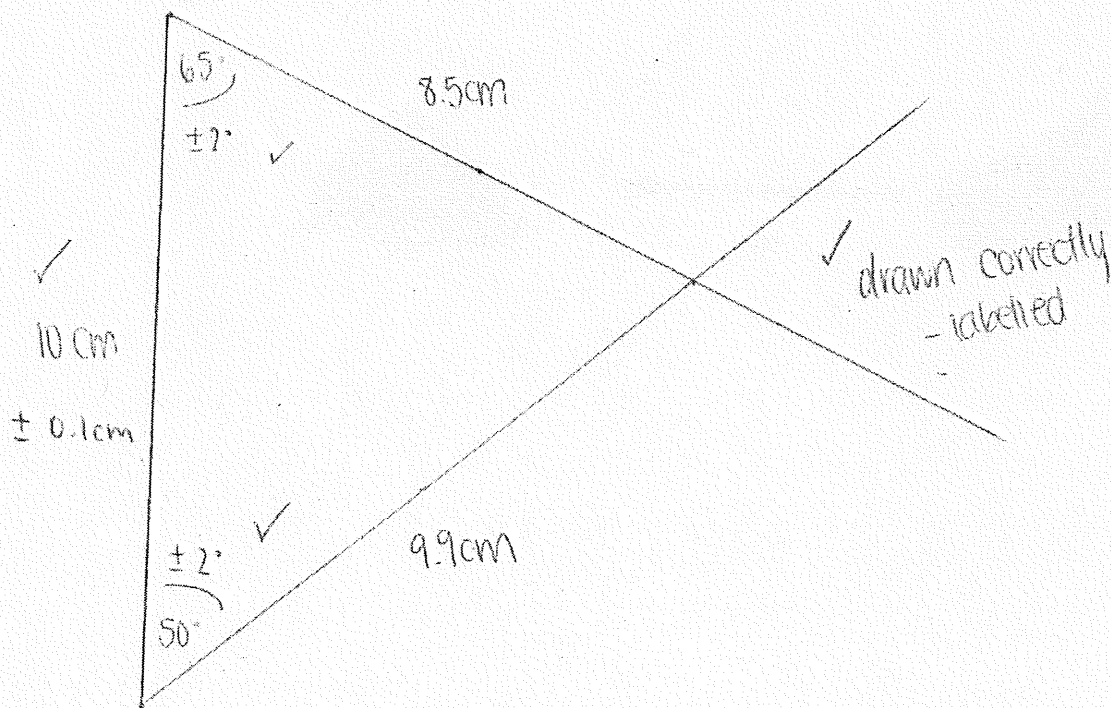
Question 5 (6 marks)

Create an accurate scale drawing of the diagram on the right to determine how far the boat is from each station.

Use scale 1 = 200000



- lines don't intersect
- not labelled



$$8.5 \times 2 = 17 \text{ km}$$

✓

$$9.9 \times 2 = 19.8 \text{ km}$$

✓



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Test 3

Working Time: 35 minutes

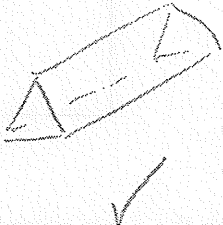
Marks: 30 marks

Calculator Assumed

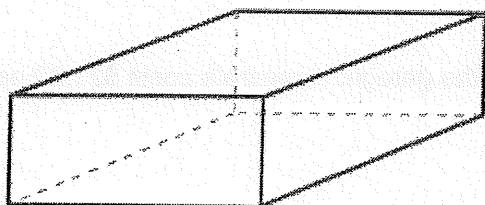
(Formulae sheet and one A4 page of notes)

Question 5 (5 marks – 2, 3)

- a) Draw and name the following shape, according to the description given below:

Description	Name	Drawing
A 3D shape that is made up of 5 faces – 2 triangles and 3 rectangles.	Triangular prism ✓	 ✓

- b) How many vertices, faces and edges does the following shape have?



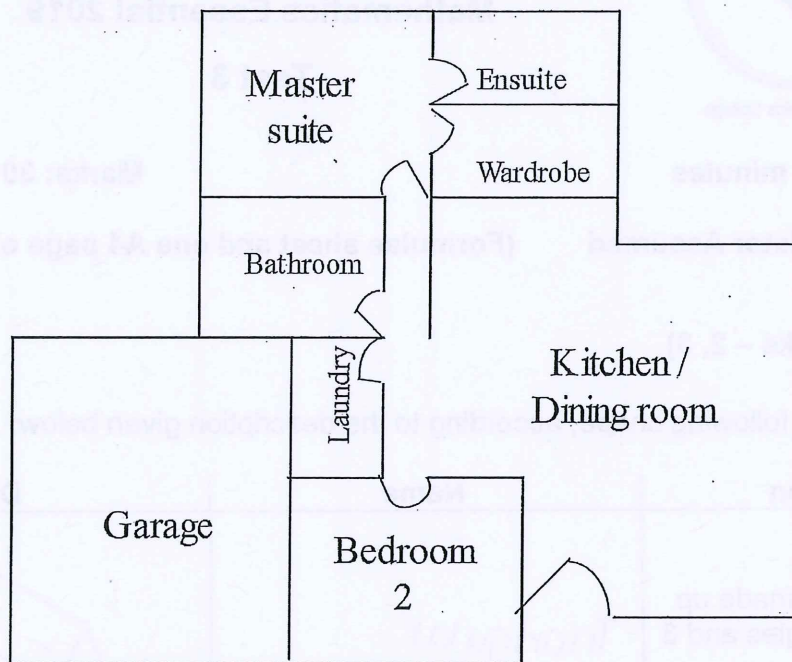
V : 8 vertices ✓

F : 6 faces ✓

E : 12 edges ✓

Question 6 (7 marks: 2, 2, 3)

Below is the floor plan for Mrs Wood's new holiday house.



Scale 1: 200

- a) Using the scale given, find the area of the garage

$$4.5 \times 200 = 900$$

$$3.9 \times 200 = 780$$

$$900 \times 780 = 702000 \text{ cm}^2$$

$$70.2 \text{ m}^2$$

- b) Mrs Wood decides that she wants to concrete the floor of the garage. If concrete costs \$21.20 per square metre, how much will it cost to complete?

$$70.2 \times 21.2 = \$1488.24$$

FT

- c) The bathroom, laundry and ensuite are to be tiled, with tiles costing \$41.40/m². How much will it cost to buy tiles?

$$(5.2 \times 2.6) + (5.2 \times 3.8) + (2.6 \times 3.8)$$

$$= 43.16$$

$$43.16 \times 41.40 = \$1786.82$$

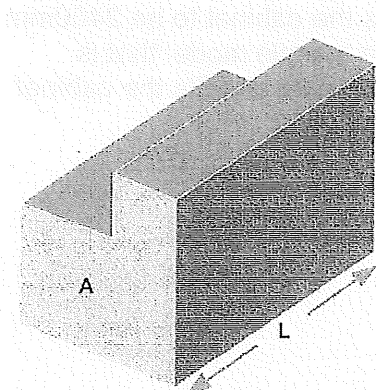
$$40 \text{ m}^2 \rightarrow 45 \text{ m}^2$$

$$\times \text{ amount } \$1656 \rightarrow \$1863$$

6

Question 7 (4 marks – 1, 3)

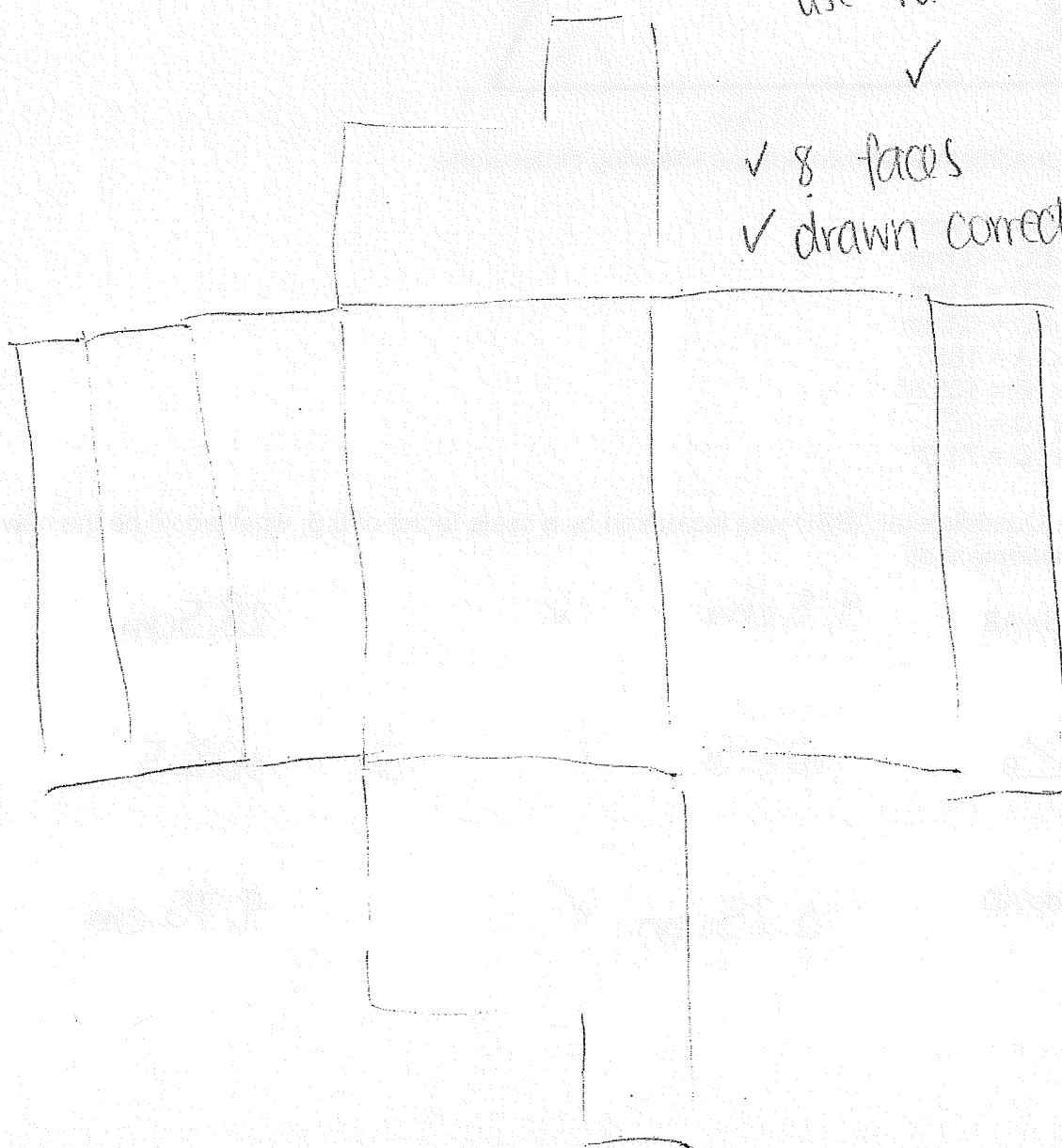
a) What is the shape of the front elevation (face A)?



irregular
hexagon

(6 sides) ✓

b) Draw the net of the 3-dimensional shape



use ruler.

✓

✓ 8 faces

✓ drawn correctly.

Question 8 (3 marks)

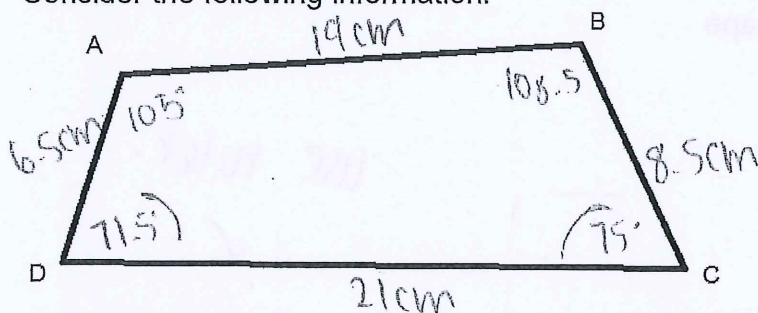
Bonnie is building a new kitchen cabinet to put in her house. She wants the cabinet to be 2400mm wide to fit in the alcove that already exists. To assist her, she has made a scale model that is 25mm deep, 40mm tall and 60mm wide. Assuming she keeps the same scale and fits the cabinet exactly to the width of the alcove, how tall and deep will the actual cabinet be?

$$\begin{array}{lcl}
 W & : & D & : & T \\
 60 & : & 25 & : & 40 \\
 \times 40 \downarrow & & & & \\
 2400 & : & 1000 & : & 1600 \\
 & \checkmark & & \checkmark &
 \end{array}$$

$$SF: 40 \checkmark$$

Question 9 (3 marks)

Consider the following information:



The quadrilateral shown has the following dimensions:

Side AB = 19cm

Side BC = 8.5cm

Side CD = 21cm

Side AD = 6.5cm

$\angle A = 105^\circ$

$\angle B = 108.5^\circ$

$\angle C = 75^\circ$

$\angle D = 71.5^\circ$

If the Quadrilateral ABCD was increased by a scale factor of 0.5, what would be the new measurement of:

a) Side AB 9.5 cm \checkmark 28.5cm

b) $\angle B$ 108.5° \checkmark or 108.5°

c) Side AD 3.25cm \checkmark 9.75 cm