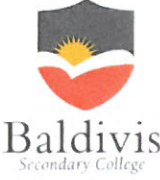
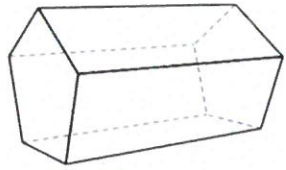
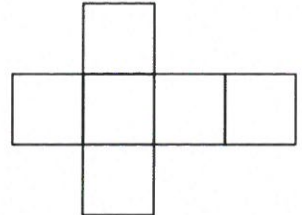
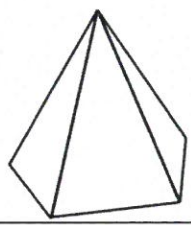
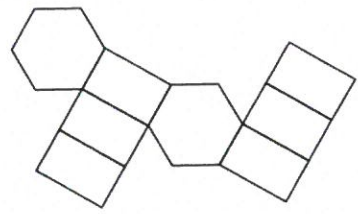
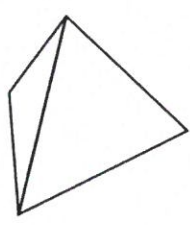
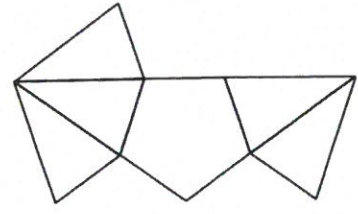
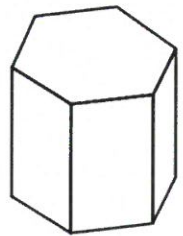
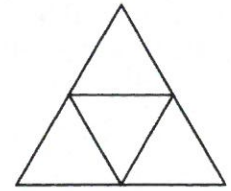
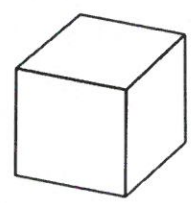
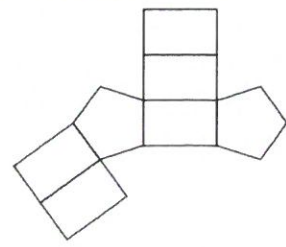


Name:	<u>Anshu gurele</u>		Date: _____
Teacher :	<u>Bowen</u>		
	Year 12 Essentials Time		<div style="border: 1px solid black; padding: 5px; display: inline-block;">/32</div>
	<u>Full working out MUST be shown to get full marks for each question.</u>		
Total Time:	30 minutes		
Weighting:	5%		
Equipment:	Pen, pencil, ruler, scientific calculator.		

Q1) Match the correct shape to its net:

[5 marks]

1		E ✓	A	
2		C ✓	B	
3		D ✓	C	
4		B ✓	D	
5		A ✓	E	

5

Q2) Define the following terms:

[3 marks]

a. A Vertex is a POINT

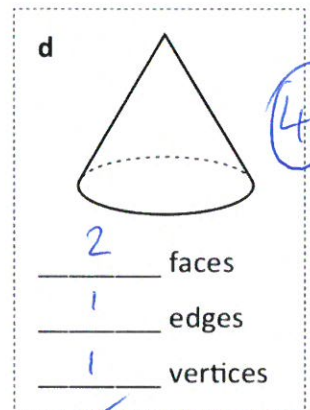
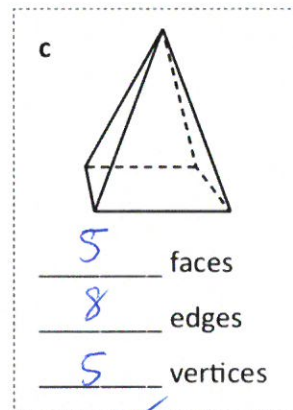
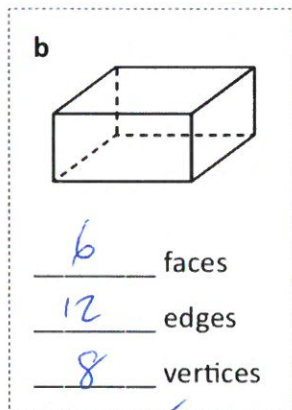
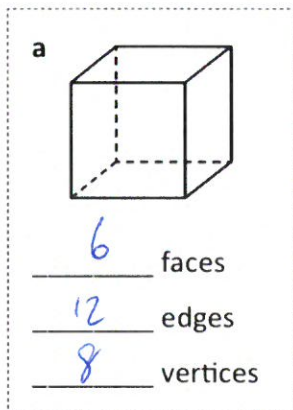
b. A Face is a FLAT

c. An Edge is a JOINT / STRAIGHT

① each

Q3) Complete the following table

[4 Marks]



④

None of incorrect

Q4) Euler's formula states that for all 3-D shapes, when adding the faces to the Vertices, then subtracting the edges you will always receive an answer of 2.

[3 Marks]

a. Does this formula hold true for the shapes above?

Yes.

b. Is there a common 3-d shape above that this rule does not work for? Why?

Sphere, only 1 face

③

Q5) Using the following shape, Draw the front, right and top views of this shape:

[3 Marks]

Isometric drawing	Front view	Right view	Top view

✓

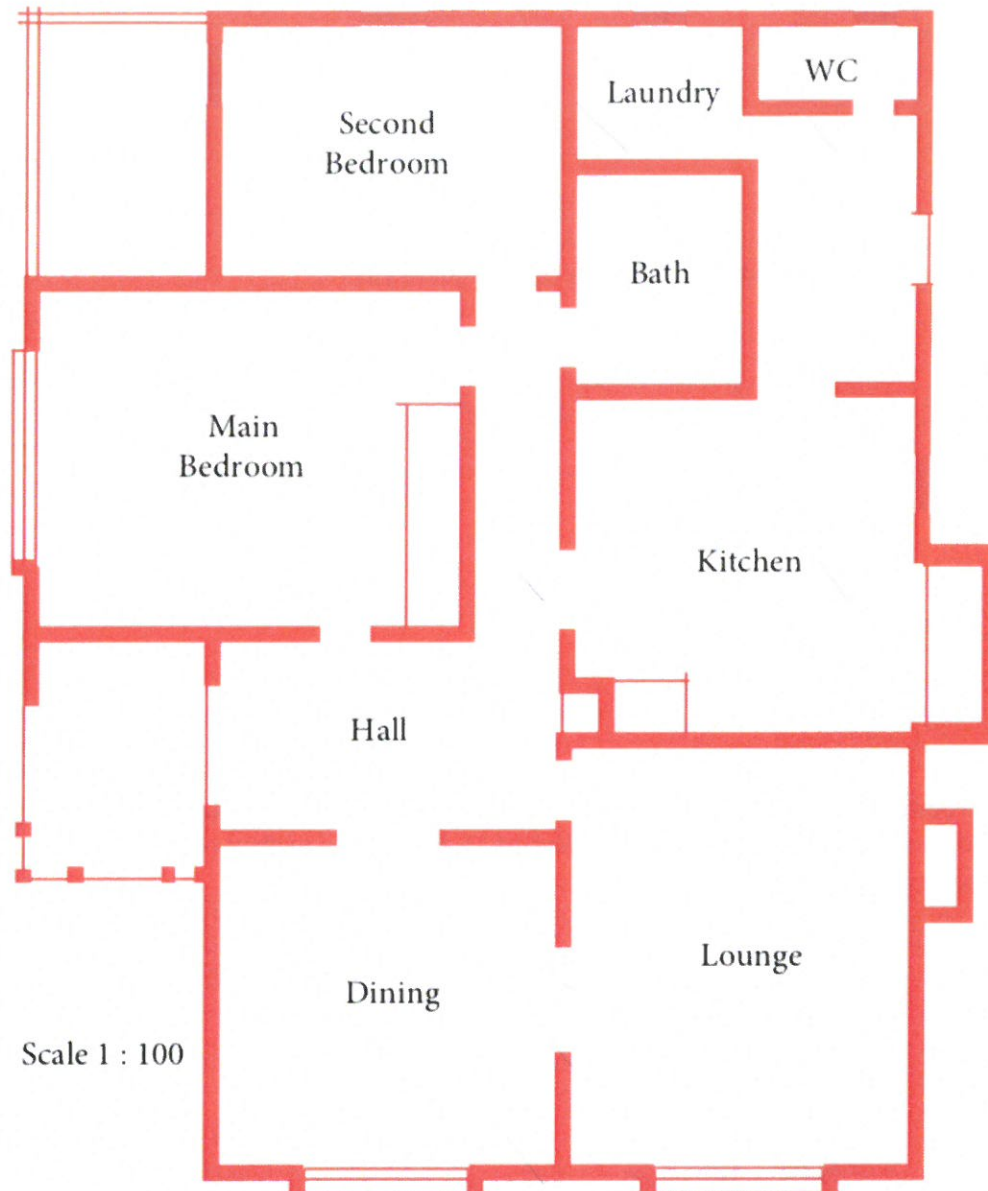
✓

✓

③

Q6) The houseplan below is draw to a scale of 1:100. Use this information to answer the following.

[14 mark]



- a. The length of the dining room is 4.5cm by 4.5cm. How long would this be in real life?

$$4.5m \times 4.5m$$

(1)

- b. The house will have tiles in the Laundry, Toilet, Kitchen and Bathroom. This is a rectangle that is 9.5cm by 4.5cm on the plan. How big is this area in the real world?

$$9.5m \times 4.5m = 42.75m^2$$

✓

✓

(2)

- c. If 1 pack of tiles cost \$80 per square meter, how much would it cost to tile this area?

$$42.75 \times 80 = \$3,420$$

(2)

FT if needed

- d. The lounge room has an area of 24.75m^2 . What is this in square cm?

$$24.75 \times 100^2 = \underline{247,500\text{cm}^2}$$

(2)

- e. The main bedroom is 5.5cm by 4.5cm , and the second bedroom is 3.5cm by 4.5cm . They choose to use carpet tiles $800\text{mm} \times 800\text{mm}$. They come in a pack of 15. How many packs would they need to purchase to cover both rooms?

(7)

$$\begin{array}{r} 5.5 \times 4.5 = \underline{24.75} \\ 3.5 \times 4.5 = \underline{15.75} \\ \hline 40.5\text{m}^2 \end{array}$$

$$800\text{mm} = 0.8 \times 0.8 = \underline{0.64\text{m}^2} \times 15 = \underline{9.6\text{m}^2}$$

$$\therefore 40.5 \div 9.6 = 4.21875$$

≈ 5 packs needed