1.   (a)   The diagram shows a regular octagon. Not drawn accurately. The base line of the octagon is extended. Work out the size of angle y.

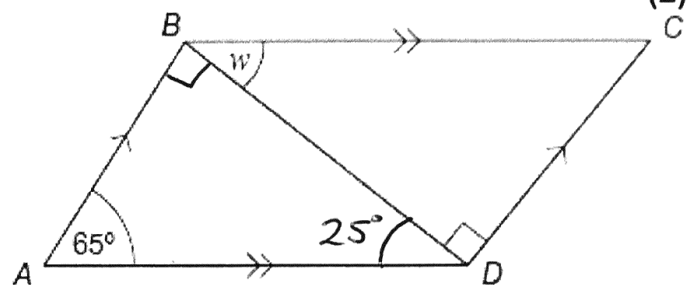$$360 \div 8 \text{ sides} = 45°$$

Answer .... 45 ....°

(2)
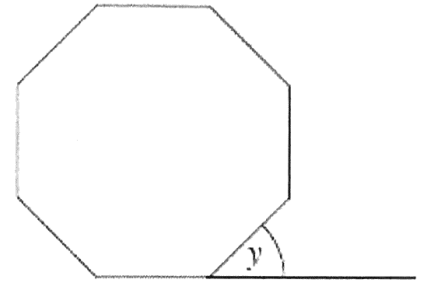
(b)   *ABCD* is a parallelogram. *BD* is a diagonal. Not drawn accurately. Work out the size of angle *w*.

$$ABD = 90°$$
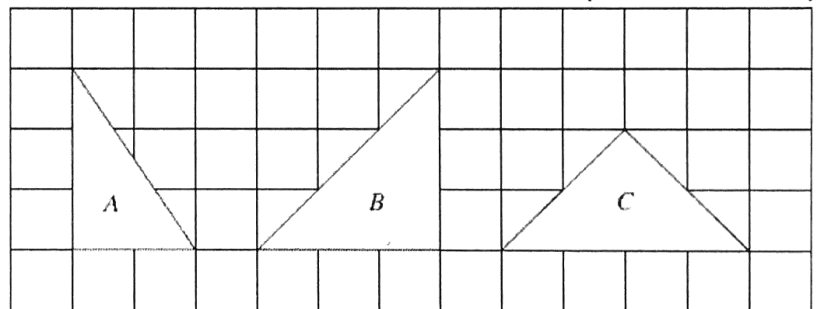$$ADB = 180 - (90 + 65)$$
$$ADB = DBC$$

Answer .... 25 ....°

(3)

(Total 5 marks)

2.   Three triangles are shown on the centimetre grid.

(a)   Which triangle is **not** isosceles?

Answer .... A ....

(1)

(b)   Work out the area of the triangle with the greatest area. State the units of your answer.

$$A = \tfrac{1}{2} \times 2 \times 3 = 3, \quad B = \tfrac{1}{2} \times 3 \times 3 = 4.5, \quad C = 4 \times 2 \times \tfrac{1}{2} = 4$$
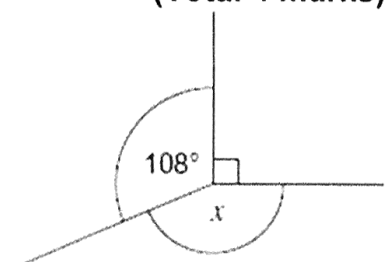
Answer .... 4.5 cm^2 ....

(3)

(Total 4 marks)

3.   (a)   Work out the size of angle *x*. Not drawn accurately.

$$360 - (90 + 108) = 360 - 198$$

Answer .... 162 ....°

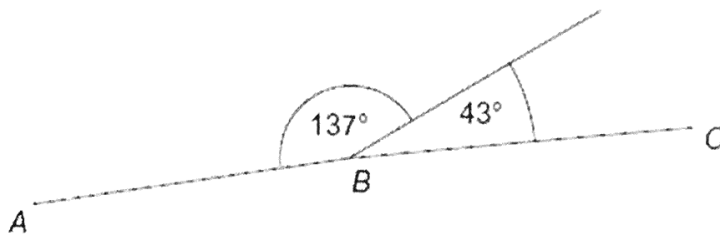**(2)**

(b) Not drawn accurately. Give a reason why, if drawn accurately, *ABC* would be a straight line.

137 + 43 = 180°
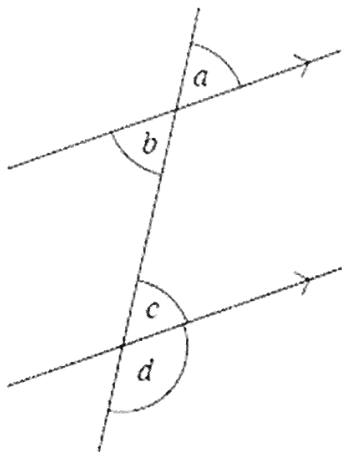
Angles on a straight line sum to 180°

(1)
(Total 3 marks)

4.

(a) Which angles are vertically opposite? Circle your answer

(a and b)   a and c   b and c   b and d   c and d

(1)

(b) Which angles are alternate? Circle your answer

a and b   a and c   (b and c)   b and d   c and d

(1)

(c) Which angles are corresponding? Circle your answer

a and b   (a and c)   b and c   b and d   c and d
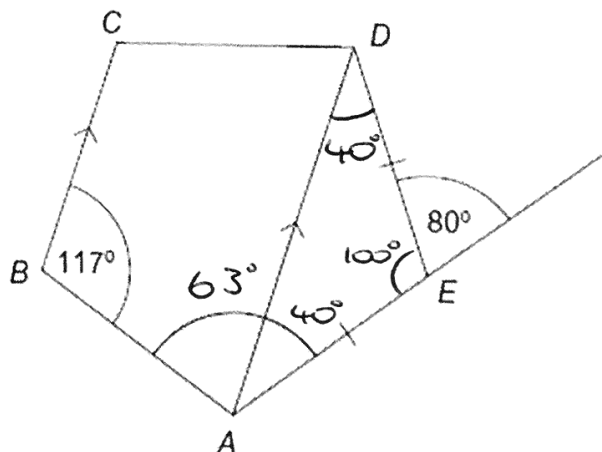
(1)
(Total 3 marks)

5. *AD* is parallel to *BC*. *AE* = *DE*. Not drawn accurately. Work out the size of angle *BAE*.

DEA = 100°

ADE = DAE = $\frac{180-100}{2}$ = 40°

BAD = 180 - 117 = 63°

BAE = 40 + 63 = 103°

Answer .... 103 ....°

(Total 3 marks)

6. **(a)** These triangles are congruent. Not drawn accurately

6 cm

65°

18 cm

6 cm

65°

18 cm
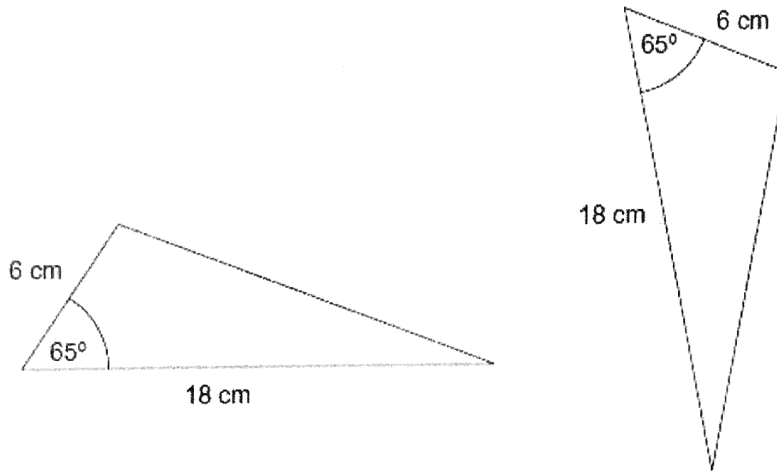
State the condition they satisfy.

Answer ...Side – angle – side.............

(1)

(b) These triangles are congruent. Not drawn accurately

11 cm

7 cm

11 cm

7 cm

State the condition they satisfy.

Answer ...right angle – hypotenuse – side.

(1)

(Total 2 marks)

(Total for test = 20 marks)