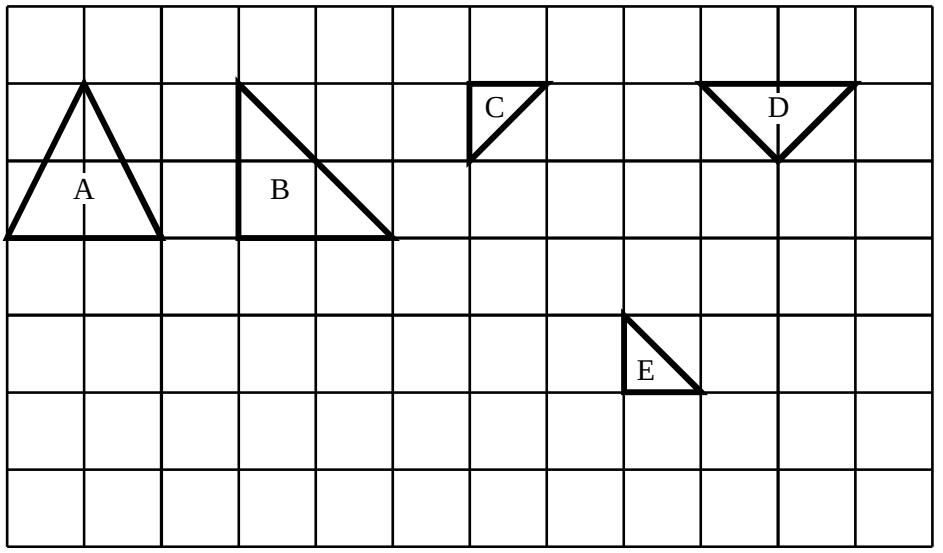
Name:	Teacher Assessment

Section A Congruency Grade G → D

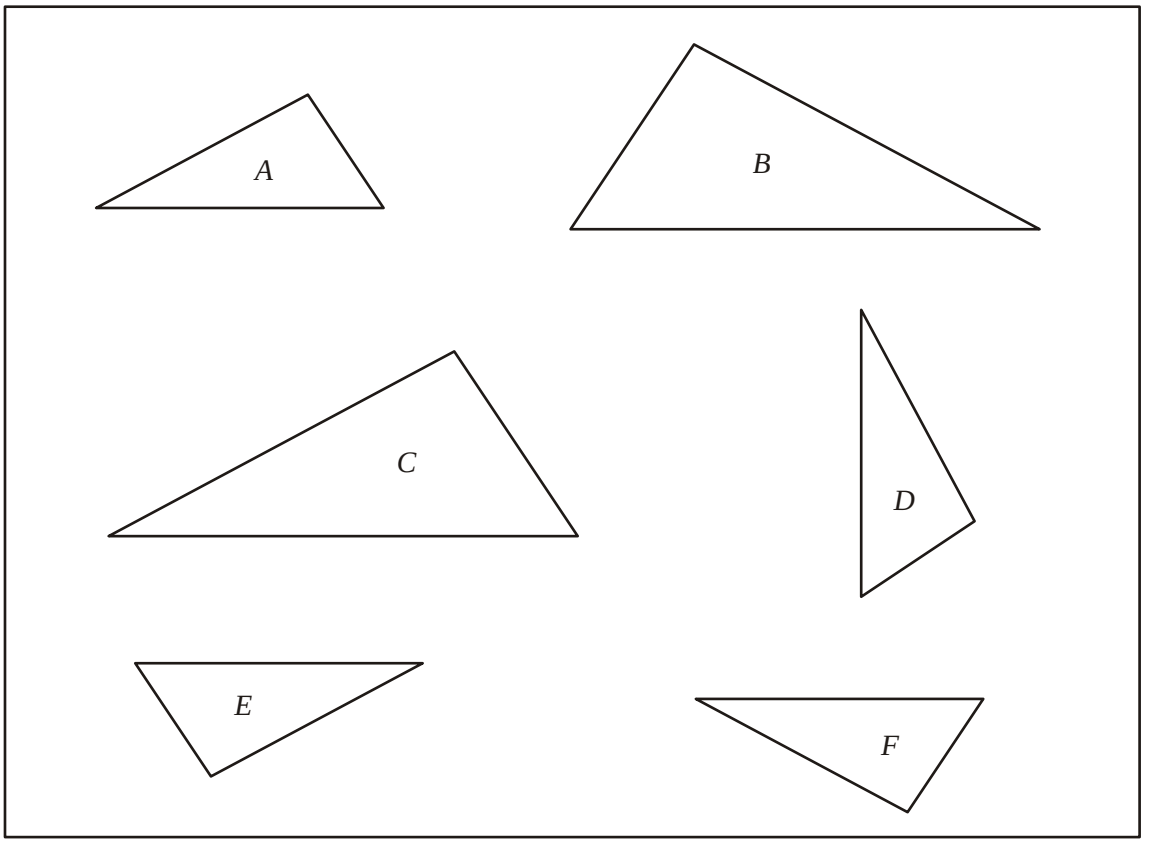
1. (a) Which **two** of these shapes are congruent?



Answer ..... and .....

(Total 1 mark)

2. The diagram shows six triangles.

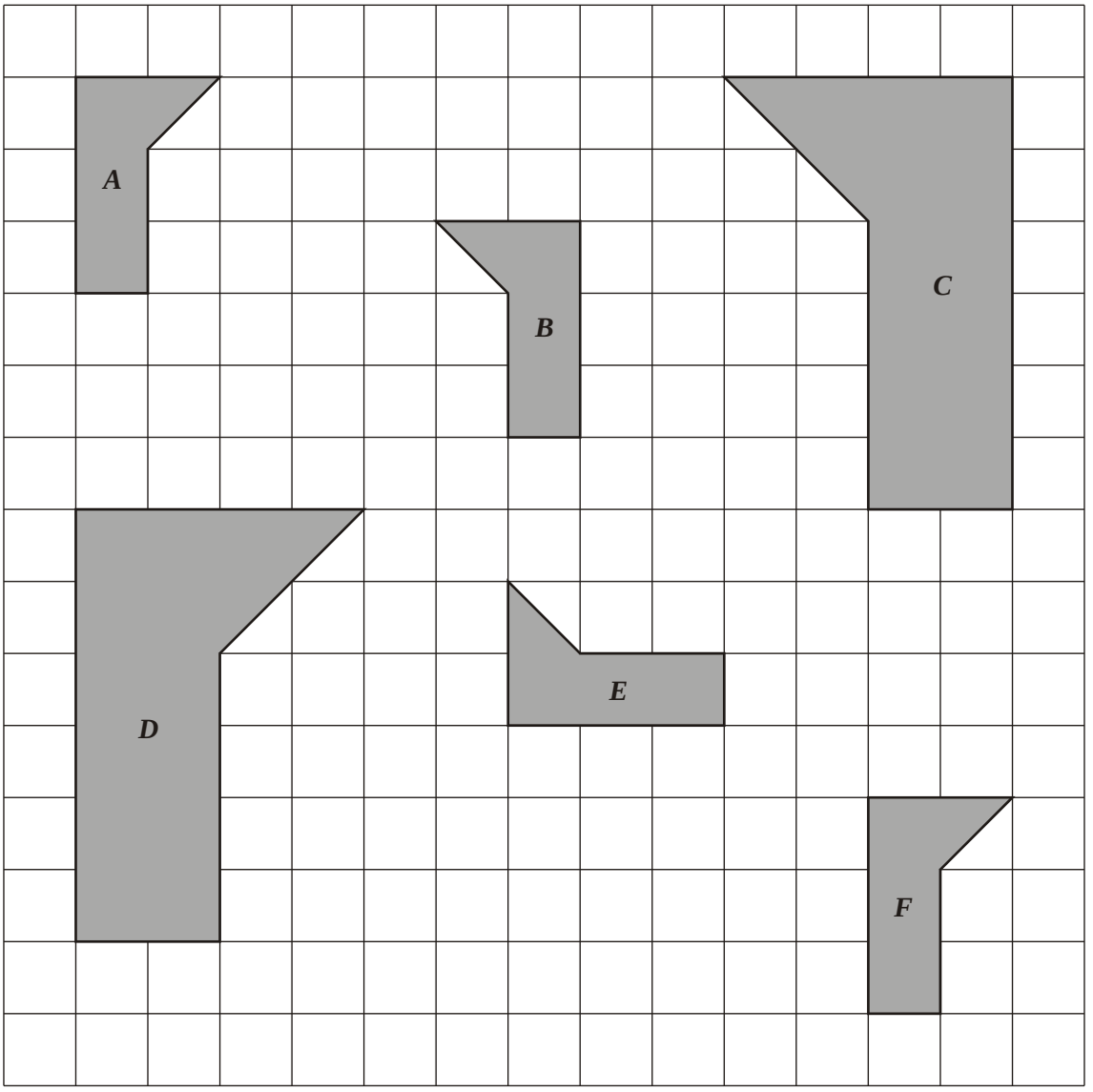


Which triangles are congruent to triangle *A*?

Answer .....

(Total 2 marks)

3. The grid shows six shapes *A*, *B*, *C*, *D*, *E* and *F*.

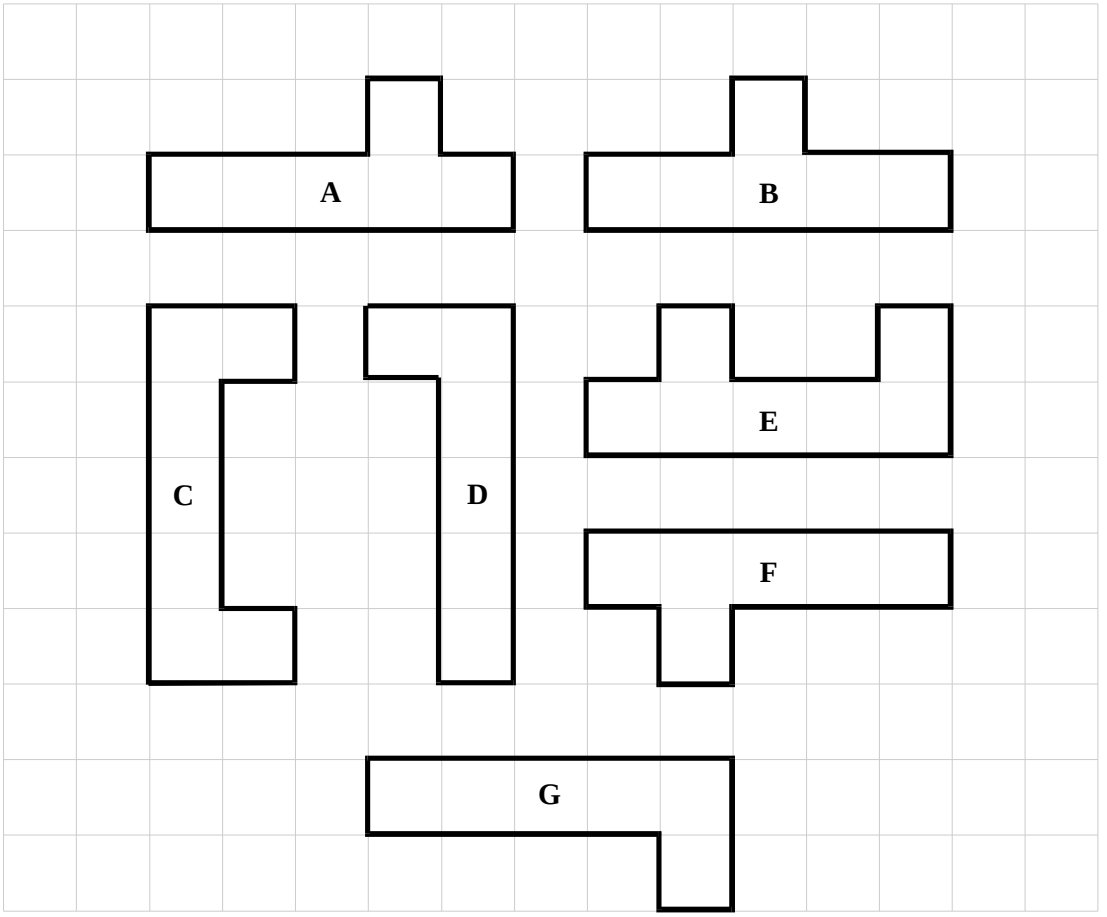


Write down the letters of the shapes which are congruent to shape *A*.

Answer .....

(Total 2 marks)

4. Seven shapes are drawn on the grid.



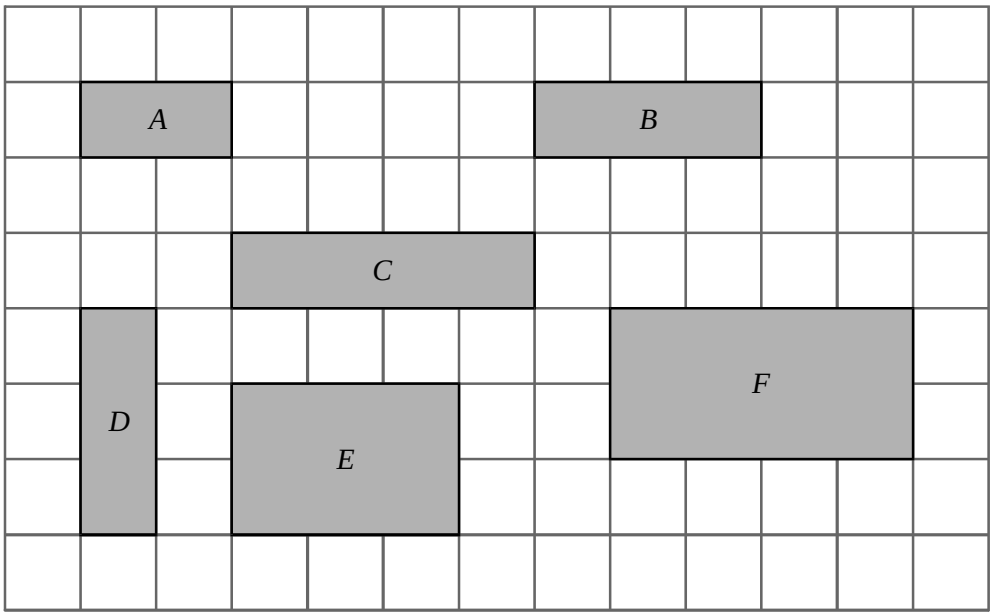
(a) Which of these shapes are congruent?

Answer.....and.....

.....and.....

(Total 2 marks)

5. Here are six rectangles on a centimetre grid.



(i) Which two rectangles are congruent?

Answer ..... and .....

(1)

(ii) Which two rectangles are similar?

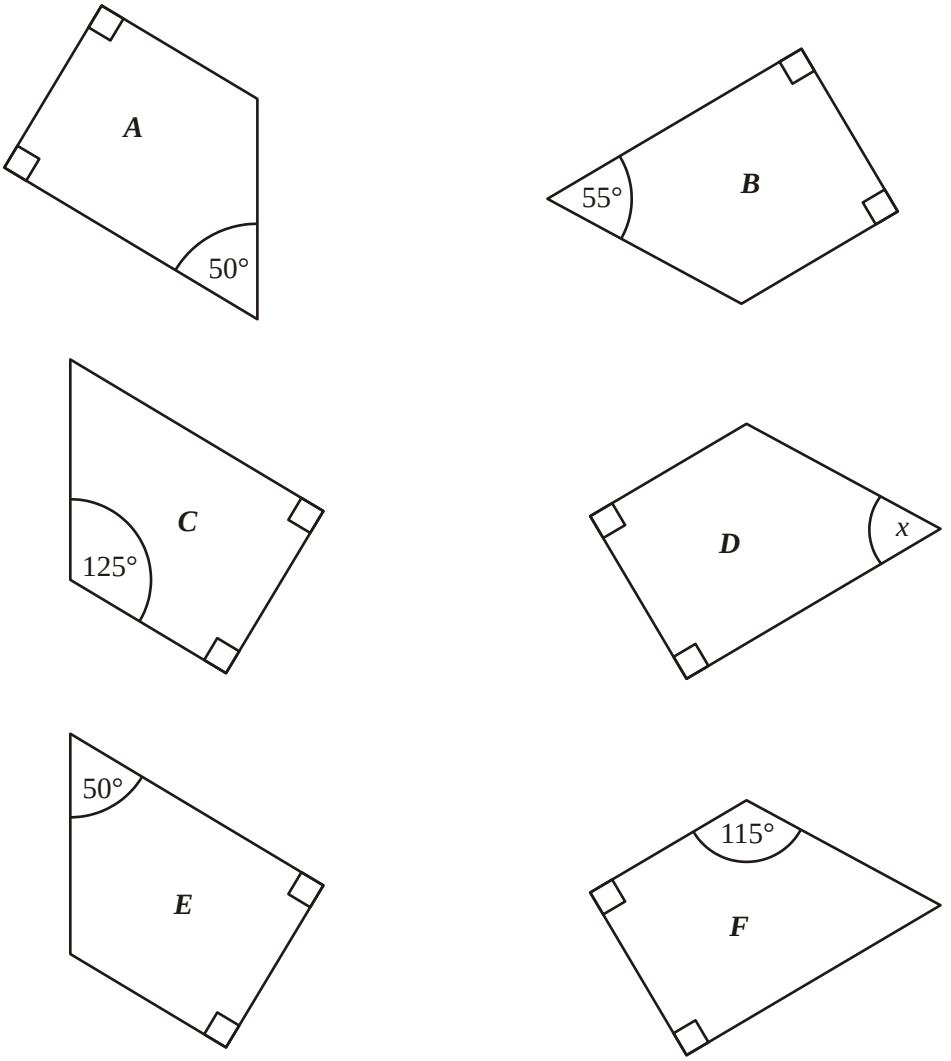
Answer ..... and .....

(1)

(Total 2 marks)

6. Rebecca has three rectangular sheets of paper.
She cuts each sheet into two pieces.
She now has the six pieces, ***A*** to ***F***, shown below.

Not drawn accurately



(a) Which piece is part of the same rectangle as ***A***?

Answer .....

(1)

(b) Which piece is part of the same rectangle as ***B***?

Answer .....

(1)

(c) Calculate the size of angle *x* on piece ***D***.

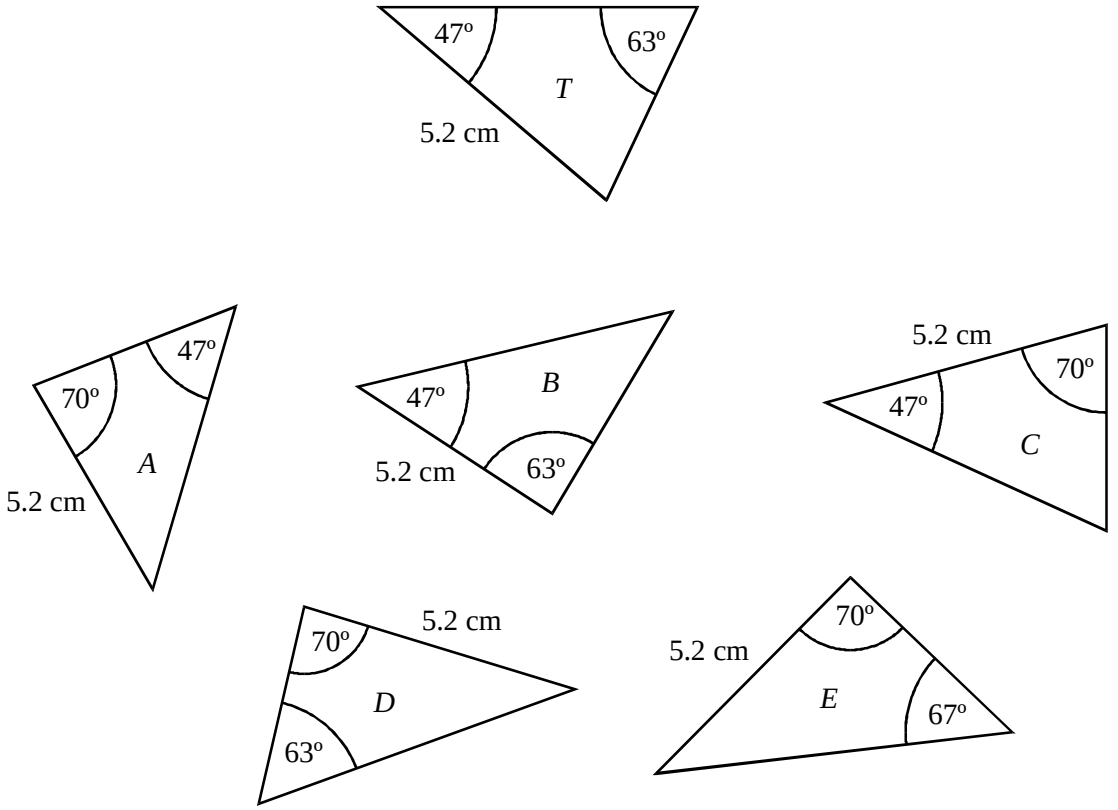
.....

Answer *x* = ... degrees

(2)

(Total 4 marks)

7. Triangle *T* and triangles *A, B, C, D* and *E* are not drawn accurately.

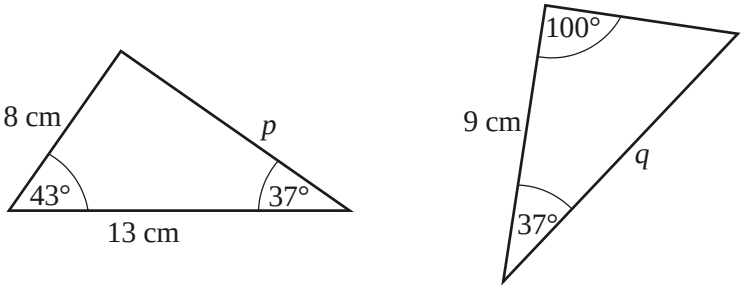


Which two of triangles *A, B, C, D* and *E* are congruent to triangle *T*?

Answer Triangle ..... and Triangle .....

(Total 2 marks)

8. The two triangles shown below are congruent.



Not drawn accurately

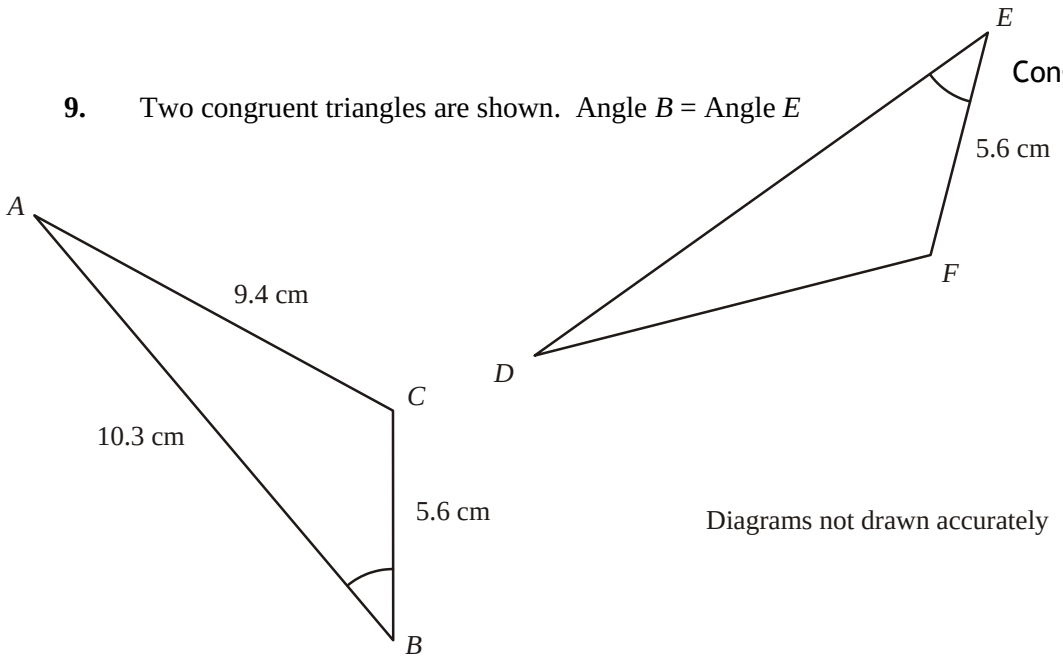
Write down the values of *p* and *q*

.....

Answer *p* = ... cm *q* = ... cm

(Total 2 marks)

9. Two congruent triangles are shown. Angle B = Angle E



Diagrams not drawn accurately

(a) Write down the length of DF.

Answer ..... cm

(1)

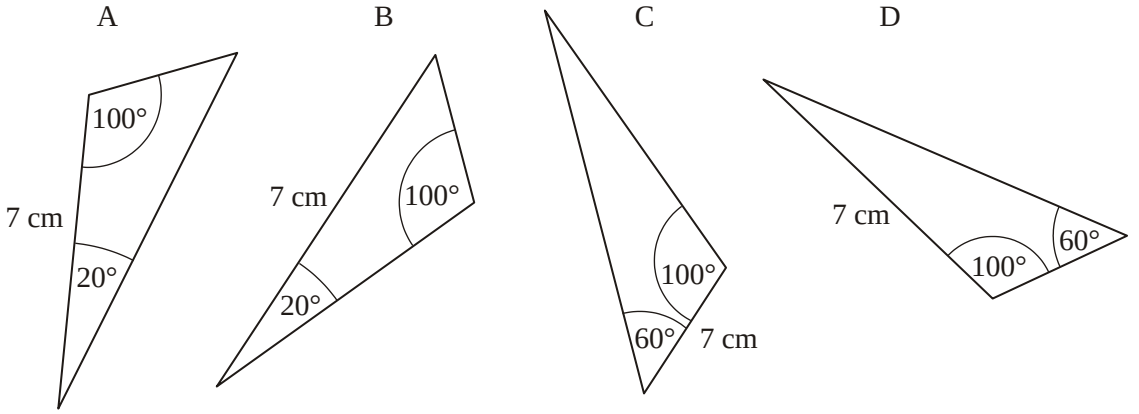
(b) Explain why angle A = angle D

.....

.....

(1)(Total 2 marks)

10. (a) Which two of these triangles are congruent?



Answer …… and ……

(1)

(b) Give a reason for your answer.

.....

.....

(1)(Total 2 marks)

Success:	Target:

Section B Similar Shapes Grade D / C

1. (a) Which of these statements are correct?

P all isosceles triangles are similar

Q all squares are similar

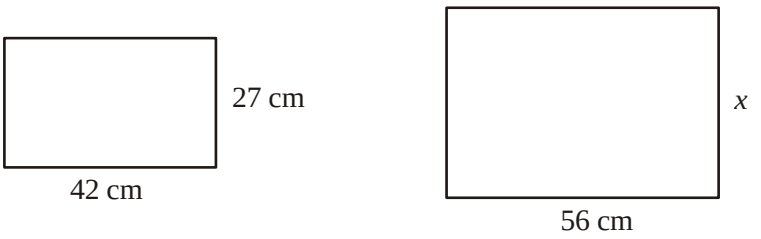
R all parallelograms are similar

S all regular pentagons are similar

Answer .....

(2)

(b) These two rectangles are similar.



Not to scale

Calculate the value of *x*.

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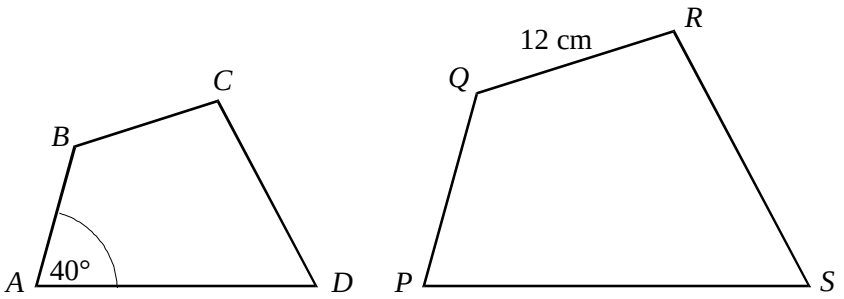
.....

Answer ..... cm

(3)

(Total 5 marks)

2. *PQRS* is an enlargement with scale factor 1.5 of *ABCD.*



Not drawn accurately

(a) Calculate the length of *BC.*

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.....

.....

Answer *BC* = ... cm

(2)

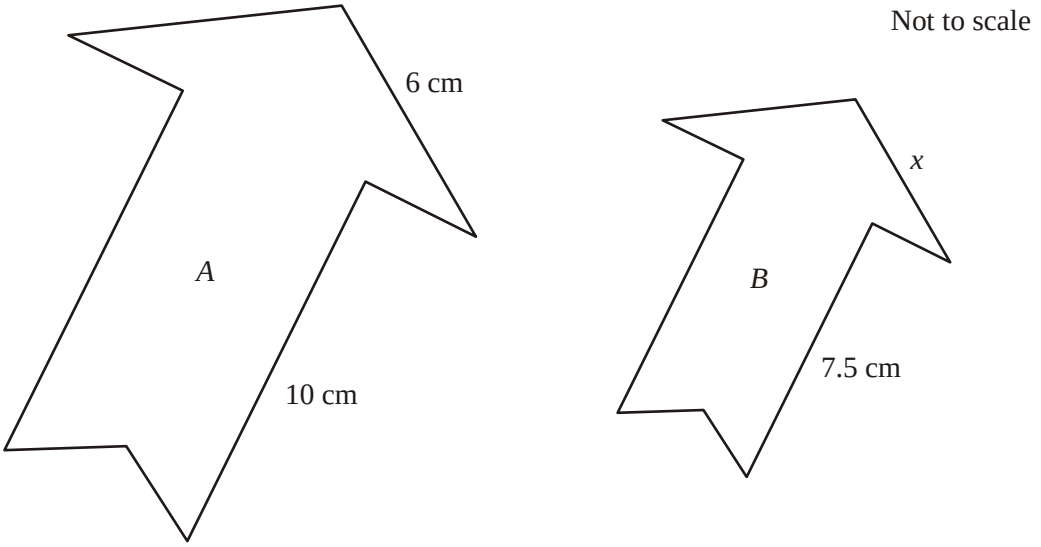
(b) Write down the size of angle *QPS.*

.....

Answer *QPS* = ... degrees

(1)(Total 3 marks)

3. The diagrams show two similar shapes *A* and *B*.



(a) Work out the value of *x*.

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.....

Answer ……..…….... cm

(3)

(b) The perimeter of shape *B* is 30 cm.

Work out the perimeter of shape *A*.

.....

.....

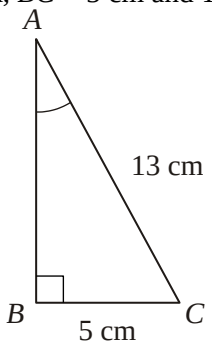
.....

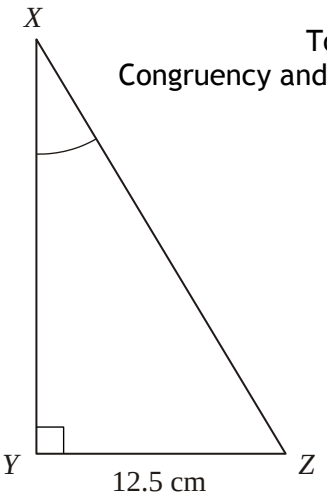
Answer ……..…….... cm

(2)

(Total 5 marks)

4. *ABC* and *XYZ* are similar triangles with right angles at *B* and *Y*.
AC = 13 cm, *BC* = 5 cm and *YZ* = 12.5 cm





Work out the length of *XY*.

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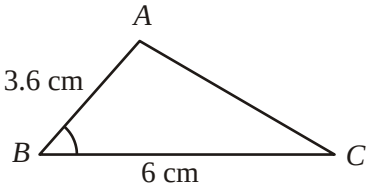
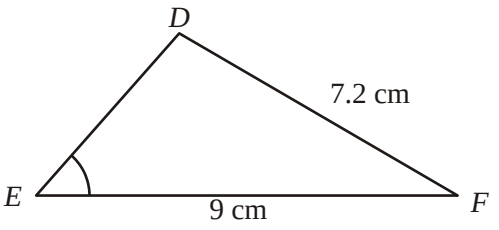
Answer ..... cm

(Total 5 marks)

5. Triangles *ABC* and *DEF* are similar. Angle *B* = angle *E*
AB = 3.6 cm and *BC* = 6 cm *DF* = 7.2 cm and *EF* = 9 cm





(a) Calculate the length of *DE*.

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.....

Answer ..... cm

(2)

(b) Calculate the length of *AC*.

.....

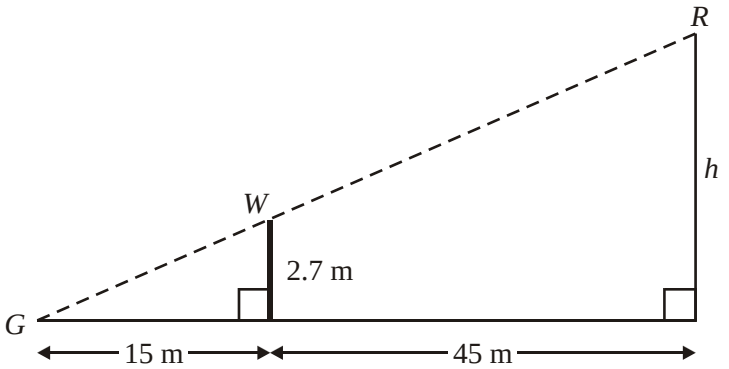
.....

.....

Answer ..... cm

(2)(Total 4 marks)

6. Gary, *G*, can just see the top of a radio mast, *R*, over a wall, *W*.
Gary is 15 m from the wall.
The wall is 45 m from the radio mast.
The wall is 2.7 m high.



Not to scale

Calculate the height of the radio mast, marked *h* on the diagram.

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.....

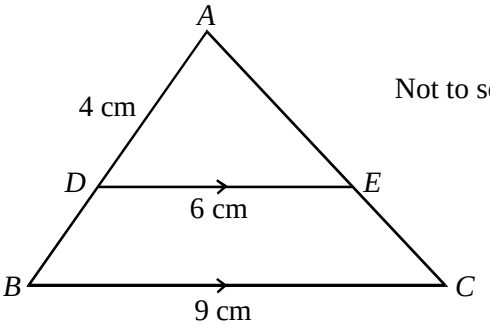
Answer ..... m

(Total 3 marks)

7. Triangles *ADE* and *ABC* are similar.

DE is parallel to *BC*.

AD = 4 cm, *DE* = 6 cm and *BC* = 9 cm.



Not to scale

Calculate the length of *BD*.

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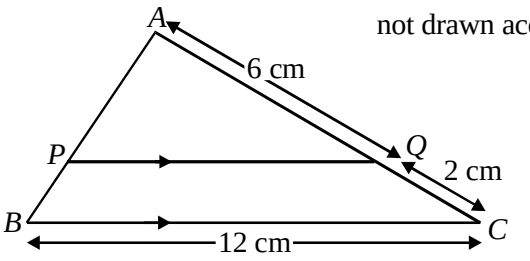
Answer ..... cm

(Total 3 marks)

8. Triangles *ABC and APQ* are similar.
PQ is parallel to *BC.*

AQ = 6 cm, *QC* = 2 cm and *BC* = 12 cm



Calculate the length of *PQ.*

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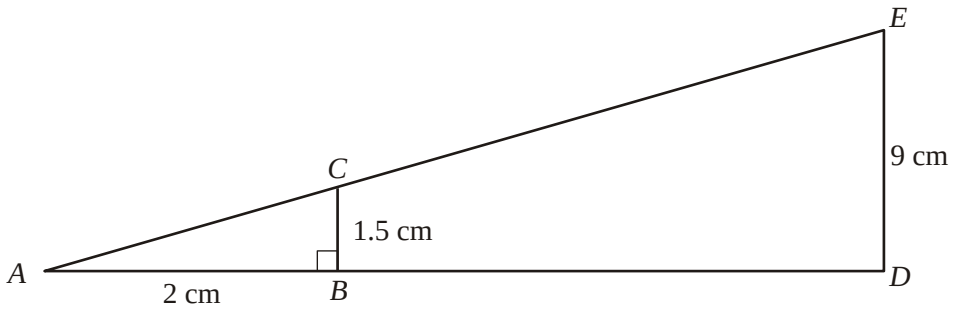
Answer.....cm

(Total 3 marks)

9. *ABC* and *ADE* are similar triangles.
BC = 1.5 cm, *DE* = 9 cm, *AB* = 2 cm



Calculate the length of *BD*.

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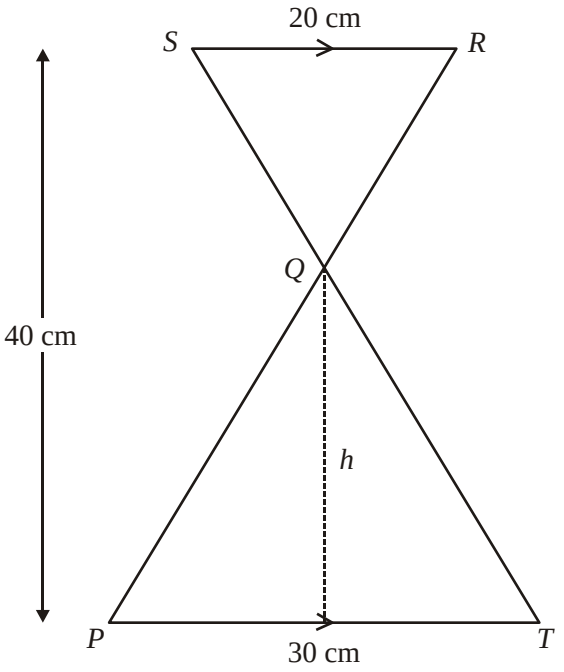
Answer ..... cm

(Total 3 marks)

10. In the diagram *SR* is parallel to *PT*.
SQT and *RQP* are straight lines.
SR = 20 cm and *PT* = 30 cm
The total height of the two triangles is 40 cm.

Not drawn accurately



Use similar triangles to calculate the height, *h* cm, of triangle *PQT*.

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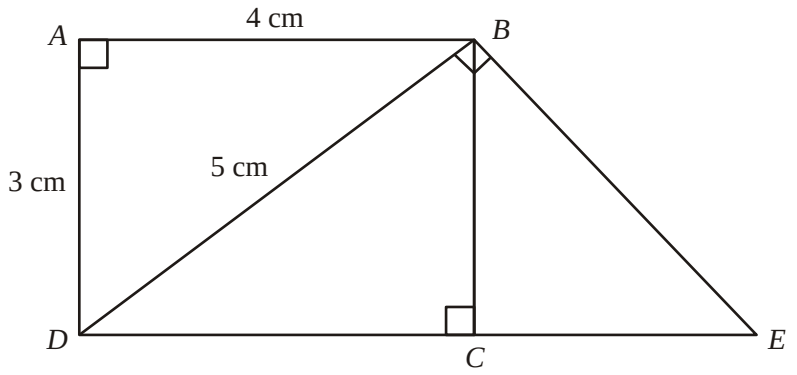
.....

Answer *h* = ... cm

(Total 3 marks)

11. *ABCD* is a rectangle.
AB = 4 cm, *AD* = 3 cm and *BD* = 5 cm.
DCE is a straight line.
Angle *DBE* is 90°



Not to scale

(a) Explain why triangles *ADB* and *BDE* are similar.

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(2)

(b) Find the length of *BE*.

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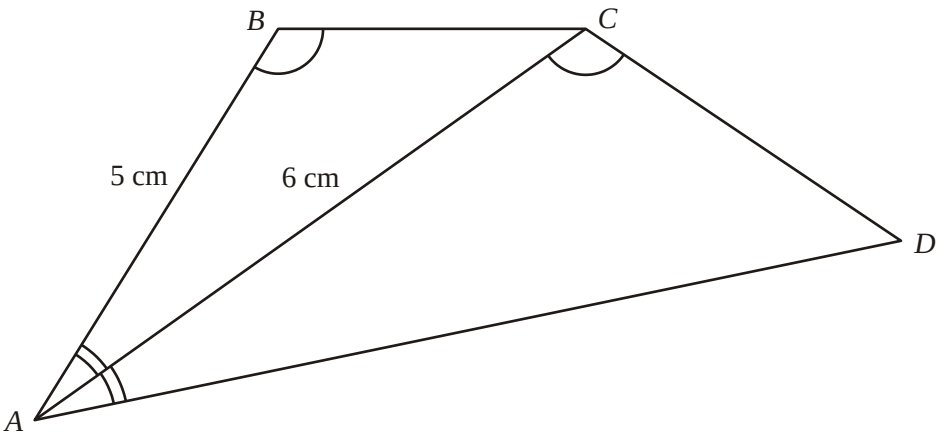
Answer .....cm

(2)
(Total 4 marks)

12. Triangles *ABC* and *ACD* are similar.
AB = 5 cm and *AC* = 6 cm.



Not drawn accurately

Calculate the length of *AD*.

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Answer.....cm

(Total 3 marks)

Success:	Target: