SCORE

Geometry
With Classified
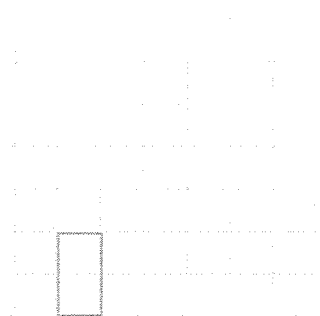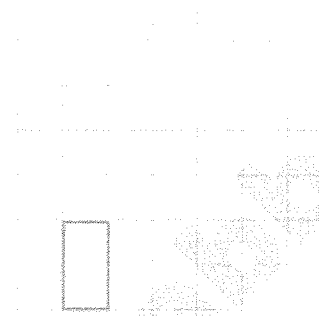### answer book

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Eng. Magda El-Labban

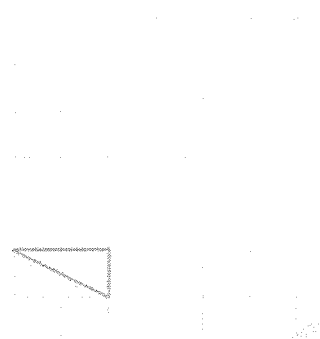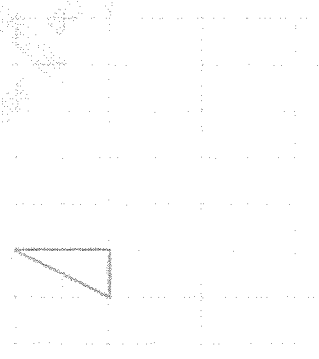📞 01007044107

16- Enlargement
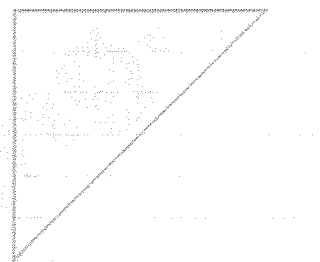
1. Enlarge the shape

a) scale factor 2

d) scale factor 3
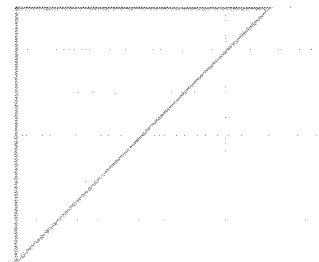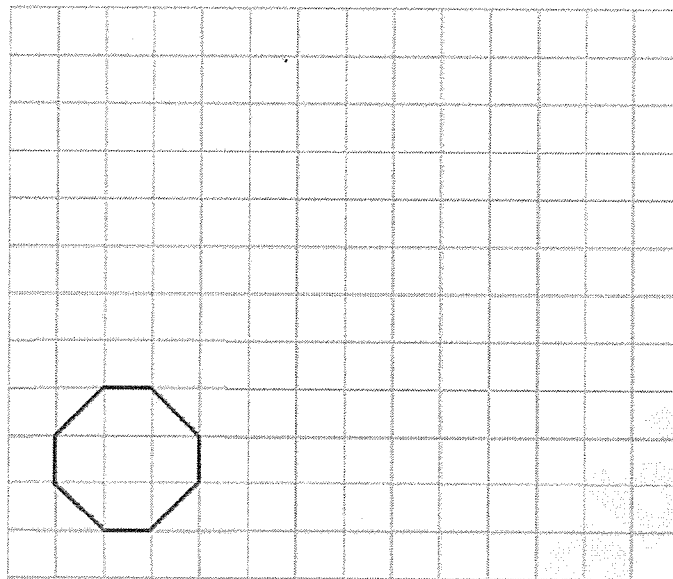
b) scale factor 2

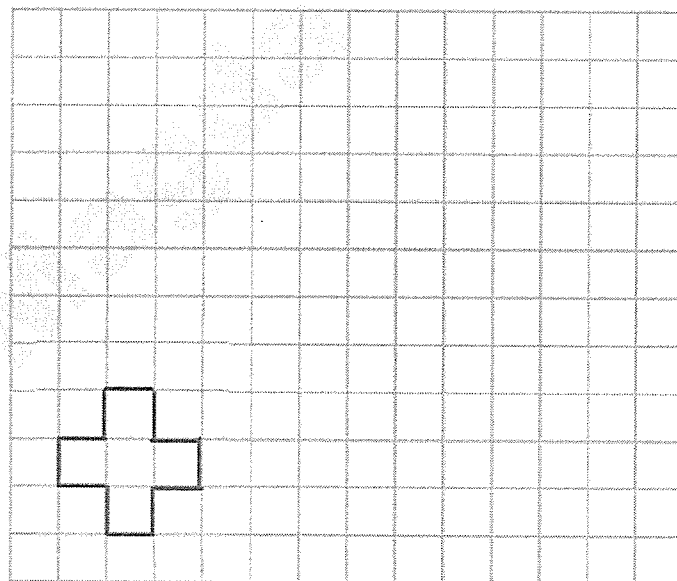e) scale factor 3

c) scale factor $\frac{1}{2}$

f) scale factor $\frac{1}{3}$

2. (a) Name the shape drawn on the grid.

(b) On the grid, enlarge the shape using a scale factor of 2

(c) On the grid, enlarge the shape using a scale factor of 3.
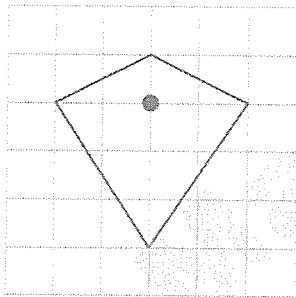
3. Complete this enlargement with scale
   factor 2 and center of enlargement shown.
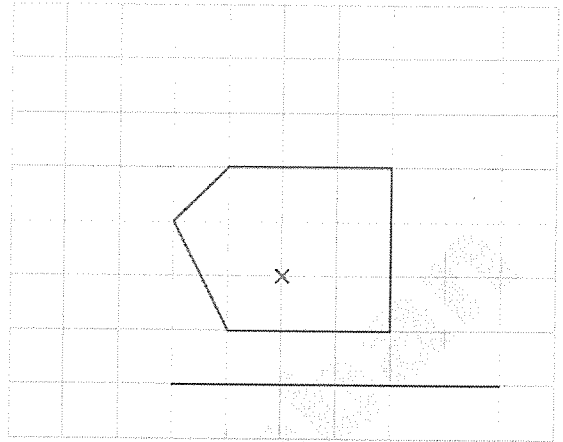
4. This is part of Kurt's homework:

   ### Question

   Enlarge this kite using a scale factor of 3
   and centre of enlargement shown.

   a) Explain the mistake Kurt has made.

   b) Make a copy of the kite on squared paper.
      Draw the correct enlargement.

5. Here is quadrilateral P.
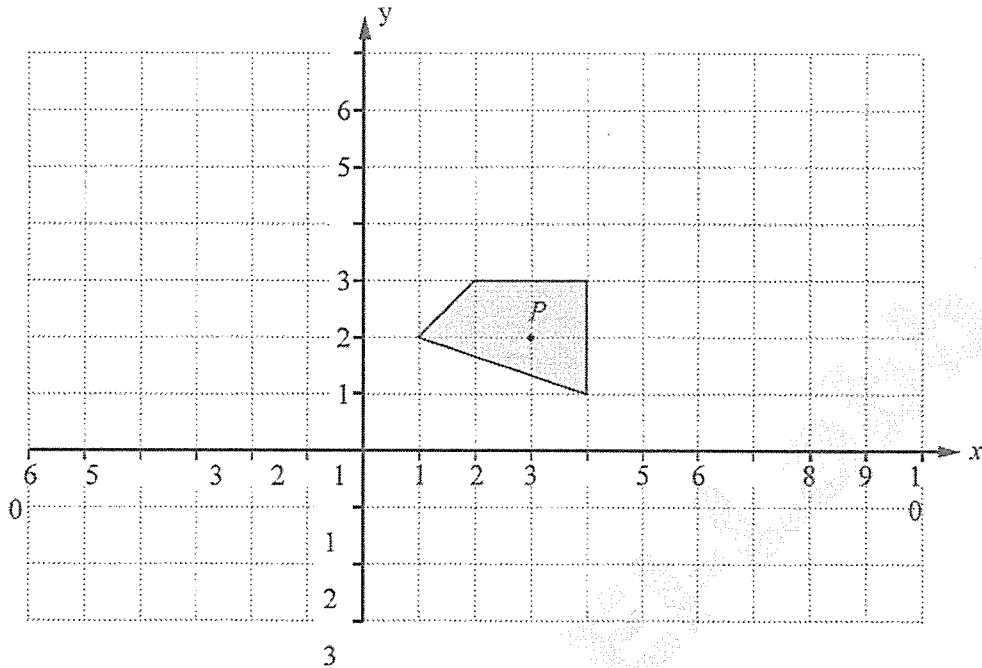
Draw an enlargement of quadrilateral P with scale factor 3 and center of enlargement (3, 2).

6. The diagram shows triangle ABC drawn on a grid.

The triangle ABC is enlarged by a scale factor of 2 from centre of enlargement (0, 0). Find the coordinates of the new position of vertex C.

7. A square, M, has perimeter 12 cm and area 9 cm2. The square is enlarged by a scale factor of 4 to become square N.
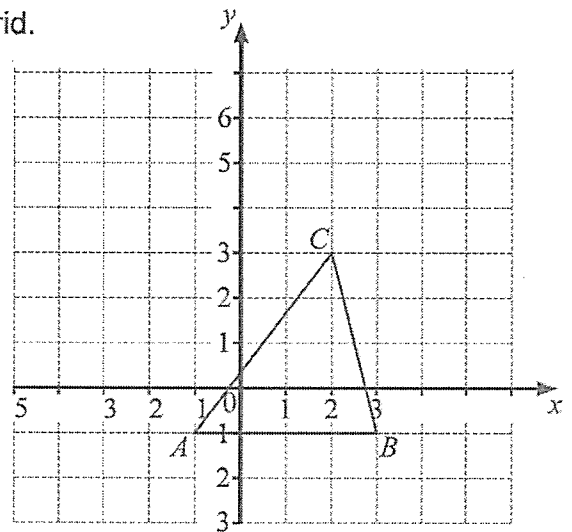
find the perimeter and area of square N.

8. The vertices of rectangle P are at (0, −2), (−6, −2), (−6, 1) and (0, 1).
The vertices of rectangle Q are at (4, 0), (2, 0), (2, 1) and (4, 1).
Rectangle P is an enlargement of rectangle Q.
Describe the enlargement.

9. The vertices of shape C are at (1, 1), (4, 1), (4, 6) and (1, 3).

The vertices of shape D are at (−1, −2), (−1, 2), (5, −2) and (5, 8).
Shape D is an enlargement of shape C.
Describe the enlargement.

10. Triangle H is an enlargement of triangle K by a scale factor of 3.
Triangle H has perimeter 36 cm and area 54 cm2.
a) Arun works out that the perimeter of triangle K is 108 cm.
Is Arun correct? Show working to justify your answer.

b) Work out the area of triangle K. Show working to justify your answer.

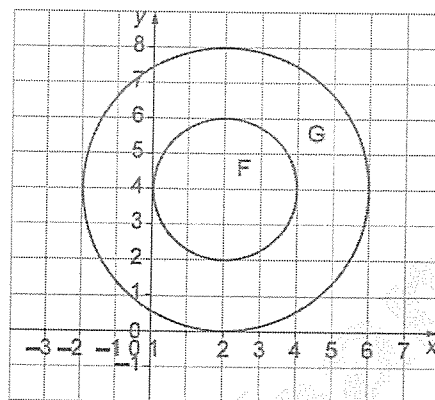11. The diagram shows three triangles, A, B and C, on a coordinate grid.
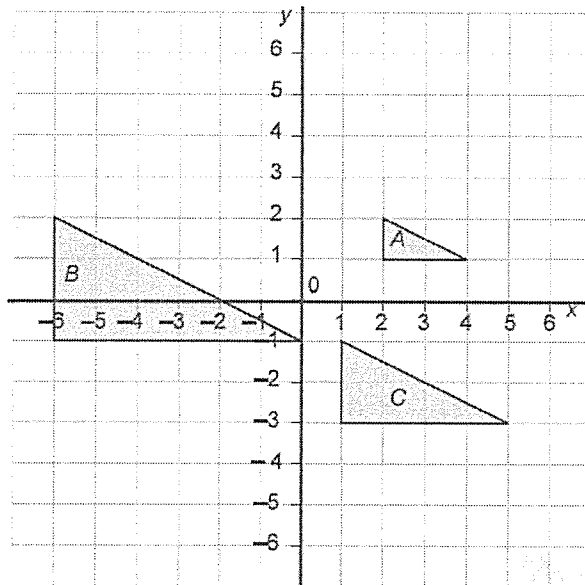
a) Triangle B is an enlargement of triangle A. Describe the enlargement.

b) Triangle C is an enlargement of triangle A. Describe the enlargement.

12. The diagram shows two circles, F and G.

a) Circle G is an enlargement of circle F.
   Describe the enlargement.

b) Circle F has radius 2 cm.
   Use the formula $C = \pi d$ to work out the
   circumference of circle F.

c) Use the scale factor of the enlargement and your
   answer to b to work out the circumference of circle G.

d) Check your answer to c is correct by using the
   formula $C = \pi d$ to work out the circumference of
   circle G.

e) Use the formula $A = \pi r^2$ to work out the area of circle F.

f) Use the scale factor of the enlargement and your answer
   to e to work out the area of circle G.

13. Rectangle E is an enlargement of rectangle D on the centimetre grid.
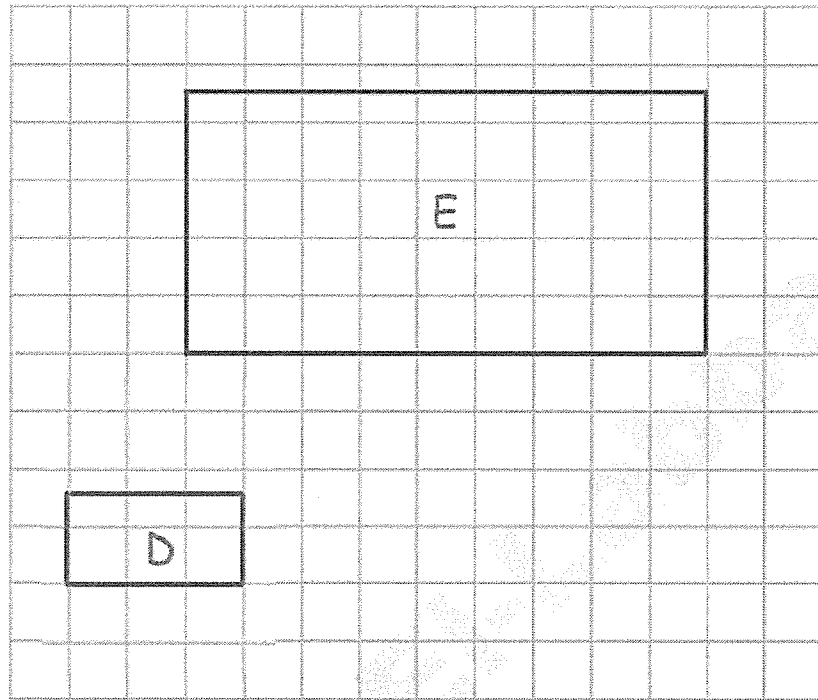
(a) What is the scale factor of the enlargement?

....

Rectangle E is enlarged by scale factor 20 to give rectangle F.

(b) Write down the length and width of rectangle F.

Length ....cm

Width ....cm
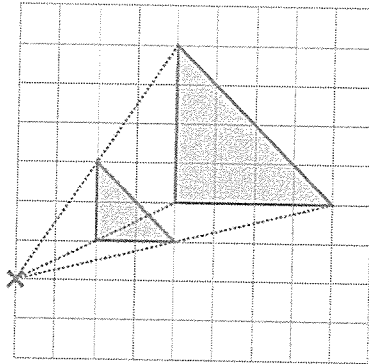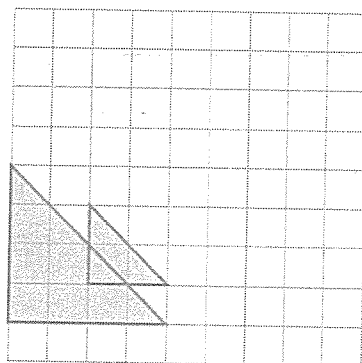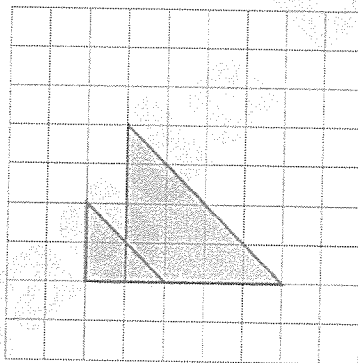
14. Look at the square grids.
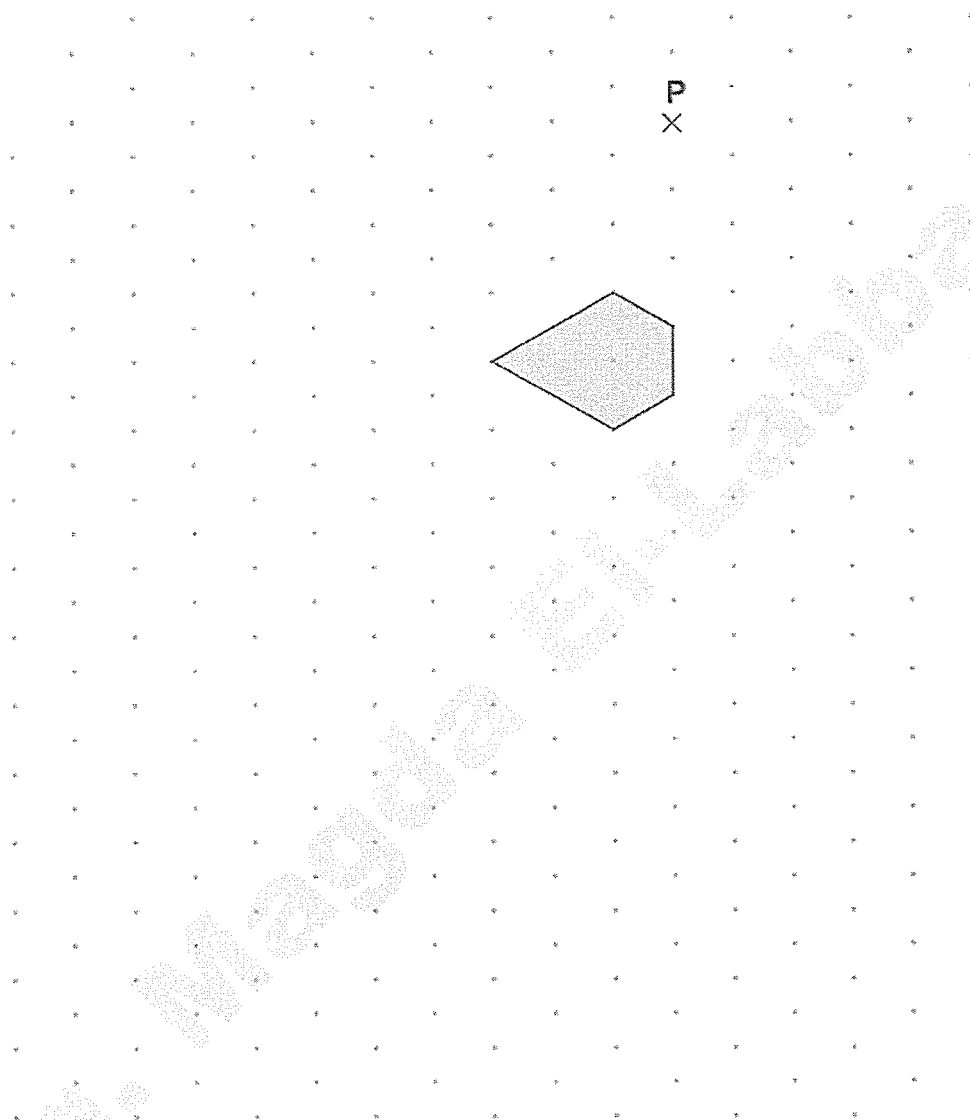
Each diagram shows an enlargement of scale factor 2
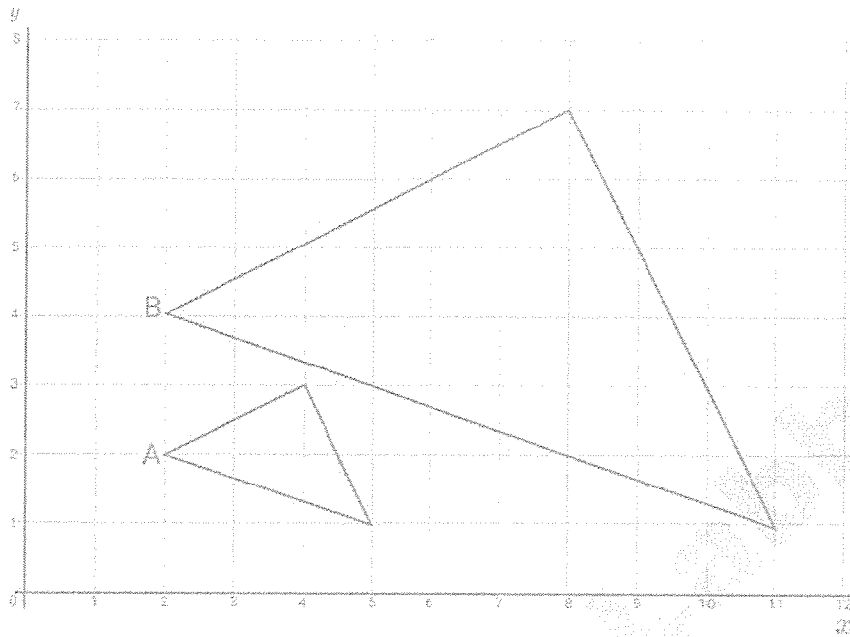
The centre of this enlargement is marked with a cross.

Where is the centre of enlargement in these

diagrams?Mark each one with a cross.

15. Enlarge the shaded shape by a **scale factor of 2**, using P as
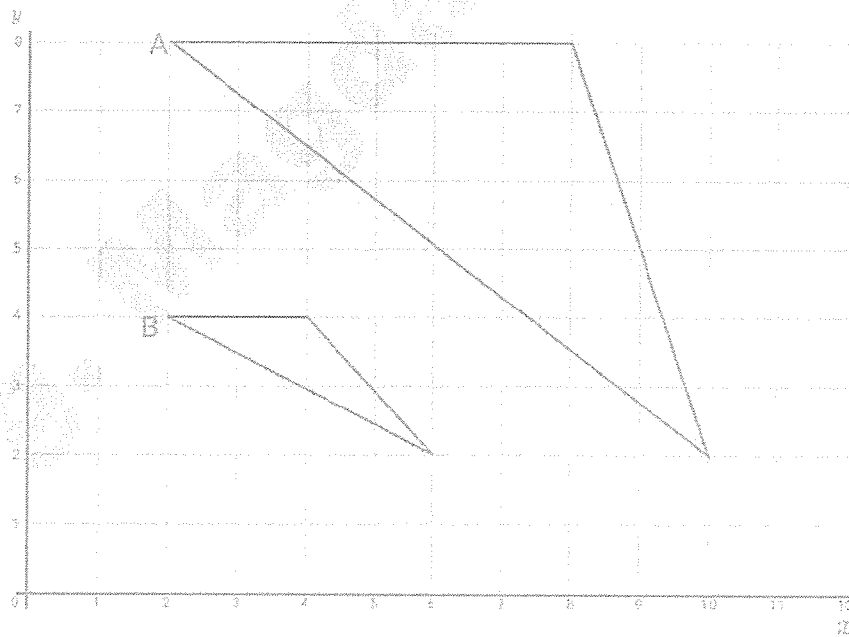   the centre of enlargement.

16. a) Shape A has been enlarged to make shape B.

Find the scale factor and the coordinates of the centre of enlargement.

b) Shape A has been enlarged to make shape B.

Find the scale factor and the coordinates of the centre of enlargement.