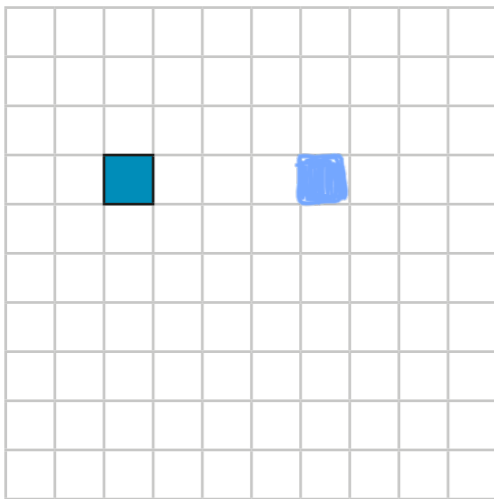


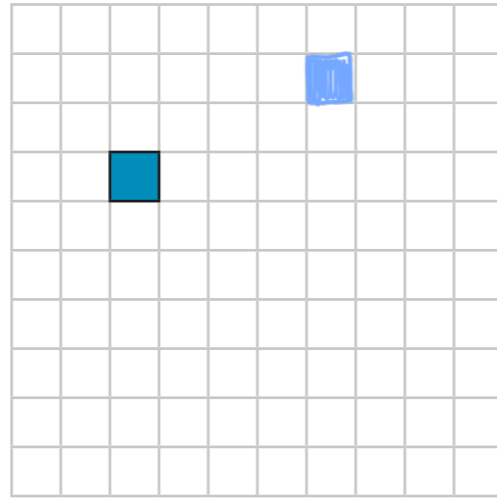
# Translation

1 Complete the translations.

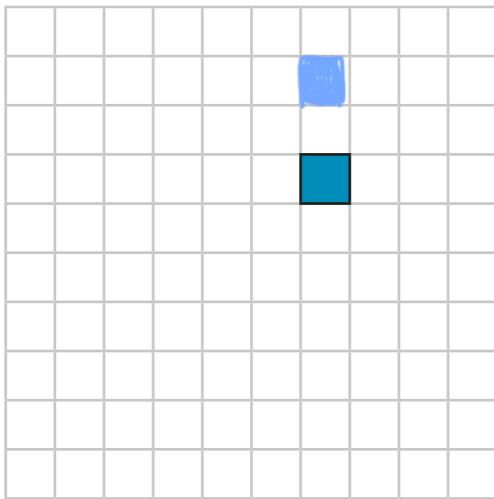
a) Translate the shape 4 squares to the right.



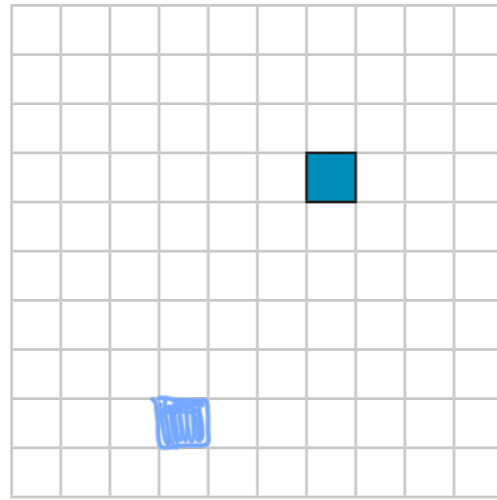
c) Translate the shape 4 squares right, 2 squares up.



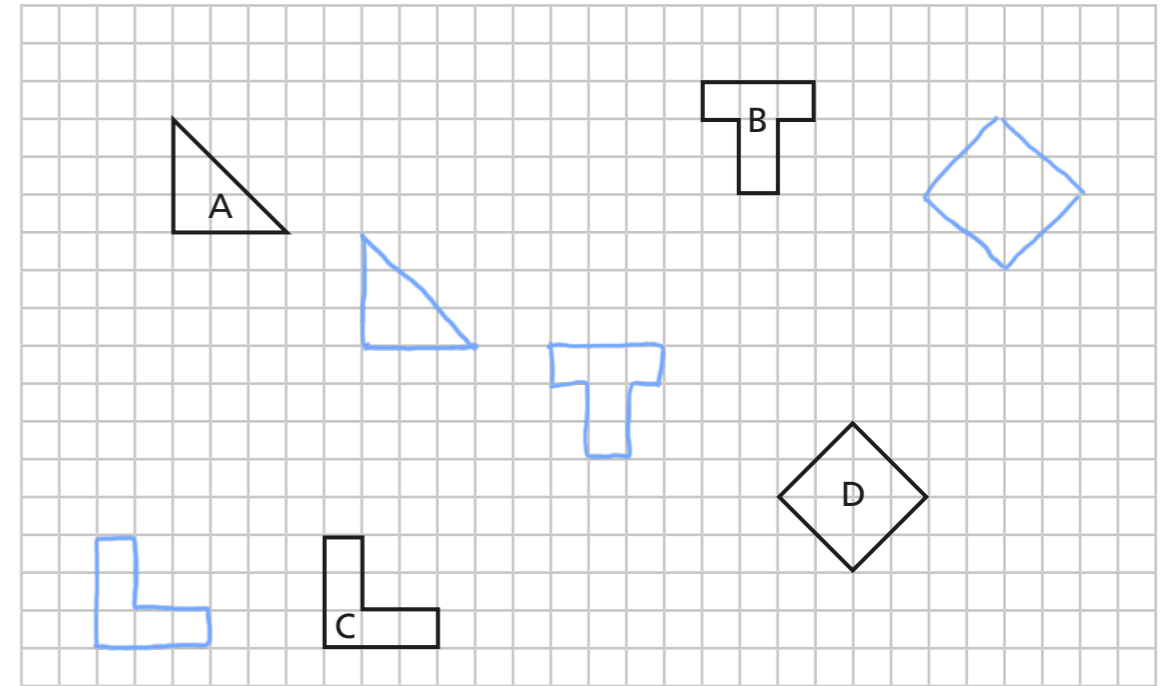
b) Translate the shape 2 squares up.



d) Translate the shape 3 squares left, 5 squares down.

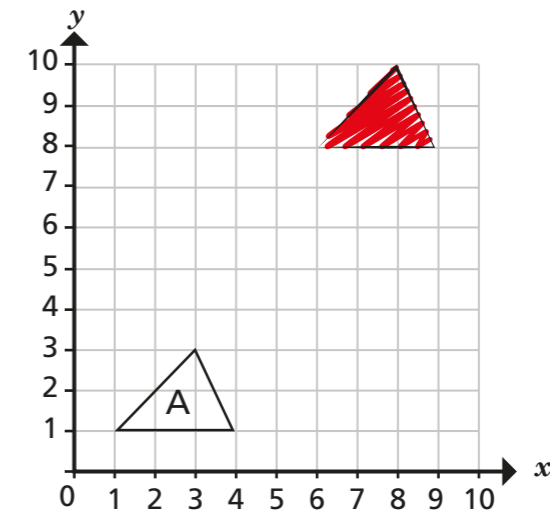


2 Four shapes have been drawn on a grid.



- a) Translate shape A 5 squares to the right and 3 squares down.
- b) Translate shape B 4 squares to the left and 7 squares down.
- c) Translate shape C 6 squares to the left.
- d) Translate shape D 4 squares to the right and 8 squares up.

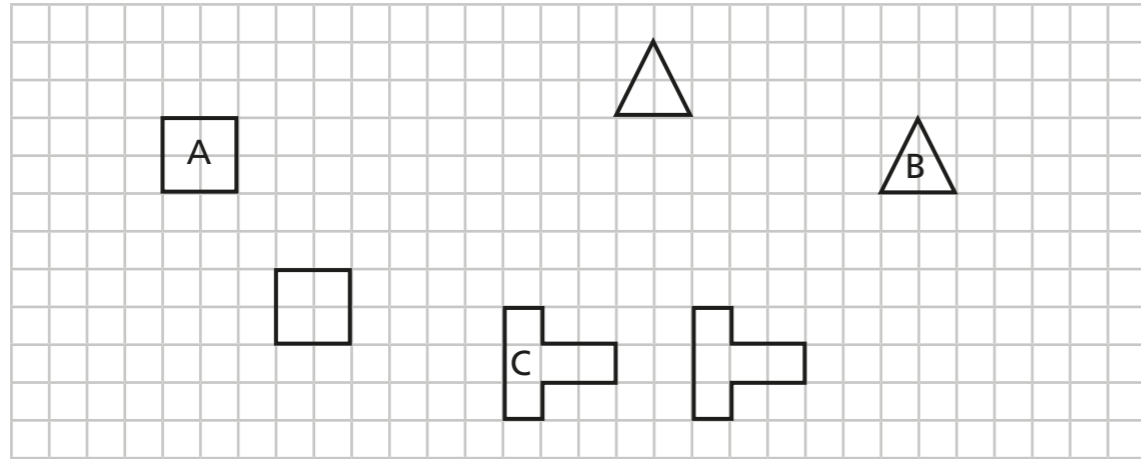
3 Dora has translated triangle A 2 squares to the right and 7 squares up.



Is Dora's drawing correct? No  
Explain why.

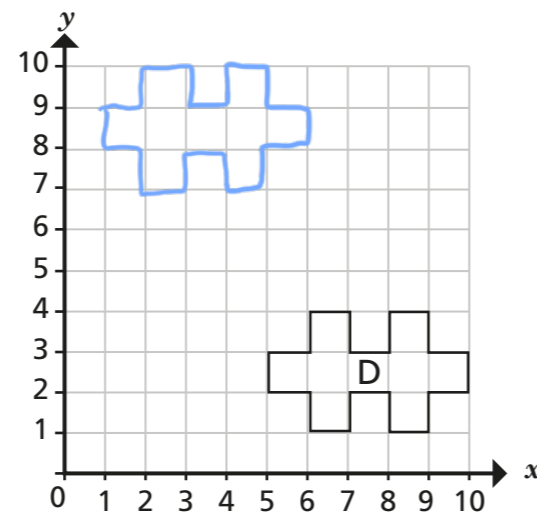


4 Complete the sentences to describe the translations.



- a) Shape A has been translated  squares to the right and  squares down.
- b) Shape B has been translated  squares to the left and  squares up.
- c) Shape C has been translated  squares to the right and  squares up/down.

5 A shape has been drawn on a coordinate grid.

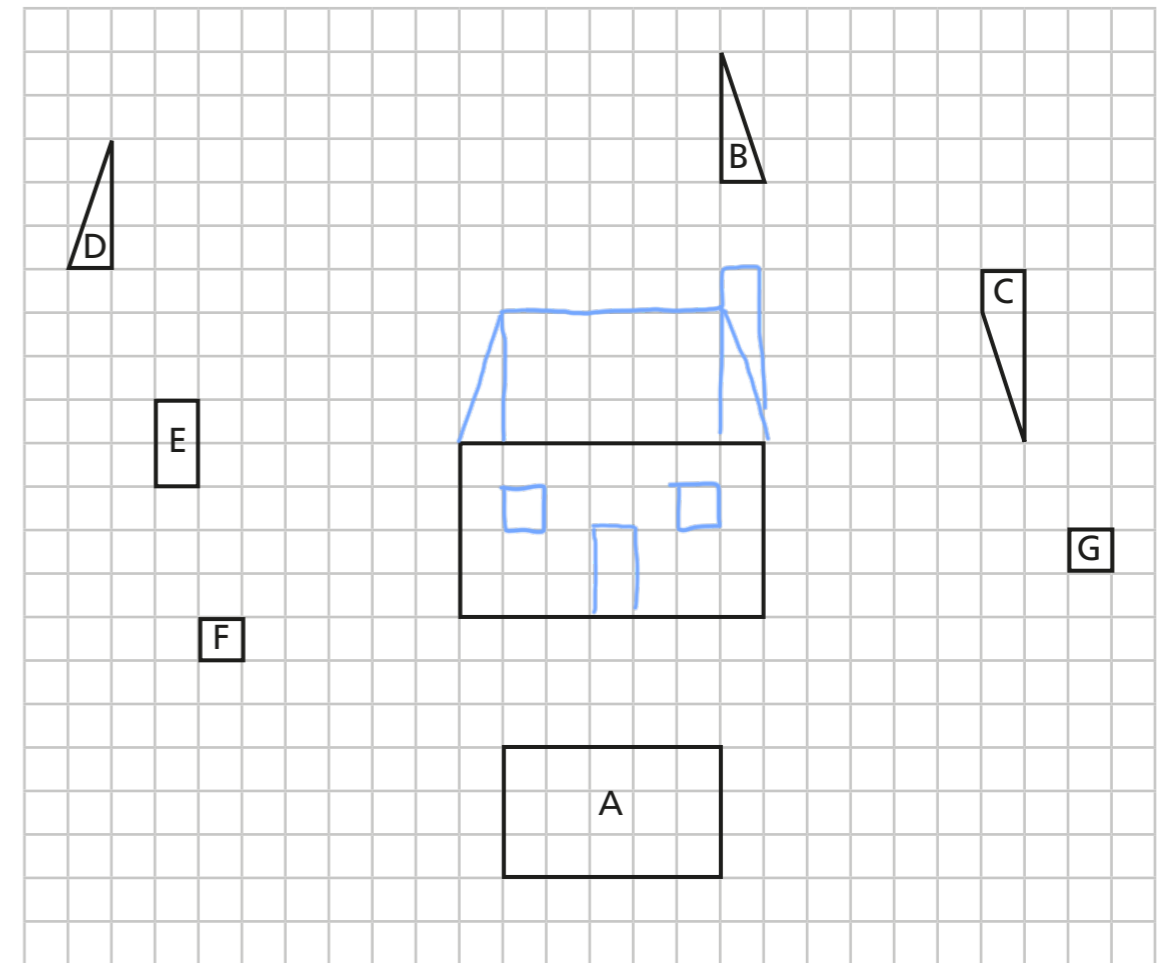


- a) Translate shape D 4 squares to the left and 6 squares up. Label the new shape E.
- b) Describe the translation from shape E to shape D.

4 squares to the right and 6 squares down

What do you notice? Does this always happen?

6 Eight polygons are drawn on the grid.



- a) Translate shape A 10 squares up.
- b) Translate shape B 6 squares down.
- c) Translate shape C 6 squares left.
- d) Translate shape D 9 squares to the right and 4 squares down.
- e) Translate shape E 10 squares to the right and 3 squares down.
- f) Translate shape F 7 squares to the right and 3 squares up.
- g) Translate shape G 9 squares to the left and 1 square up.

Create your own problem like this for a partner.

