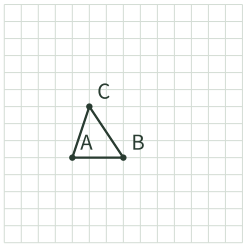
Translation: matching points and invariant lengths

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Worked example 1

Translate every labelled point on the squared grid 3 squares right, then 2 squares up. Mark the corresponding image points and join matching edges.

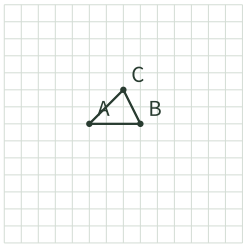


Squared grid; each square is one unit. Use the stated directions and counts.

Guided attempt 2

Translate every labelled point on the squared grid 2 squares right, then 3 squares down. Mark the corresponding image points and join matching edges.

1. For A′: right 2 squares, down ____ squares.
2. For B′: right ____ squares, down 3 squares.
3. For C′: complete the same two moves; mark A′,B′,C′ and join them in matching order.



Squared grid; each square is one unit. Use the stated directions and counts.

Prerequisite 3

Which idealised motion is a translation of the whole object?

A. A clock hand turns about its centre.

B. A page folds over a crease.

C. A drawer slides straight out without turning.

Prerequisite 4

A figure translates 4 grid units right. How many grid units right does each vertex move?

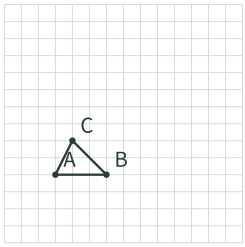
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Independent practice 5

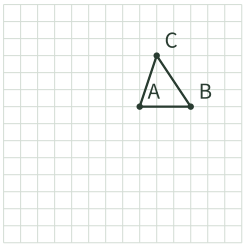
Translate every labelled point on the squared grid 4 squares right, then 3 squares up. Mark the corresponding image points and join matching edges.



Squared grid; each square is one unit. Use the stated directions and counts.

Independent practice 6

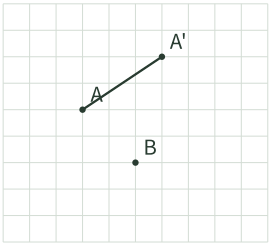
Translate every labelled point on the squared grid 3 squares left, then 2 squares down. Mark the corresponding image points and join matching edges.



Squared grid; each square is one unit. Use the stated directions and counts.

Independent practice 7

The given A→A′ move is 3 squares right and 2 up. Under the same translation, mark B′ on the squared grid.



Squared grid; each square is one unit. Use the stated directions and counts.

Independent practice 8

AB=6 cm and angle ABC=42°. A translation sends A,B,C to A′,B′,C′. State A′B′ and angle A′B′C′, with a reason.

Exit question 9

One vertex moves right 2 units, another right 3 units. Can these be corresponding moves of one translation?

A. Yes; both move right.

B. Yes; lengths always change.

C. No; the displacement is not common.

Exit question 10

The whole figure moves 3 squares right, then 1 squares down. State how its point P must move.