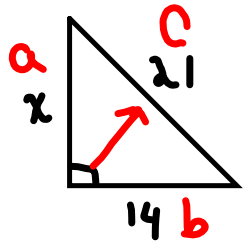
Warm Up

Grade 8

Assessment Review

1)



$a^2 = c^2 - b^2$

$= (21)^2 - (14)^2$

$a^2 = 441 - 196$

$a^2 = 245$

$\sqrt{a^2} = \sqrt{245}$

$a = 15.6$

2) Given the integers -2, +10, -7, +3, -8 , which two would give the greatest product?

$(-7) \times (-8) = +56$

3) find the value of y given $7 + y = 21$ (−7 from each side)

$y = 14$

1, 4, 9, 16, 25, 36, 49

4) Estimate $\sqrt{39}$

$\sqrt{36}$ $\quad$ $\sqrt{49}$

≈ 6.2

BEDMAS

5) Evaluate $(-18) \div (+2) - (+4) \times (+2)$

$= -9 - (+4) \times (+2)$

$= -9 - (+8)$

subtract → add; opp

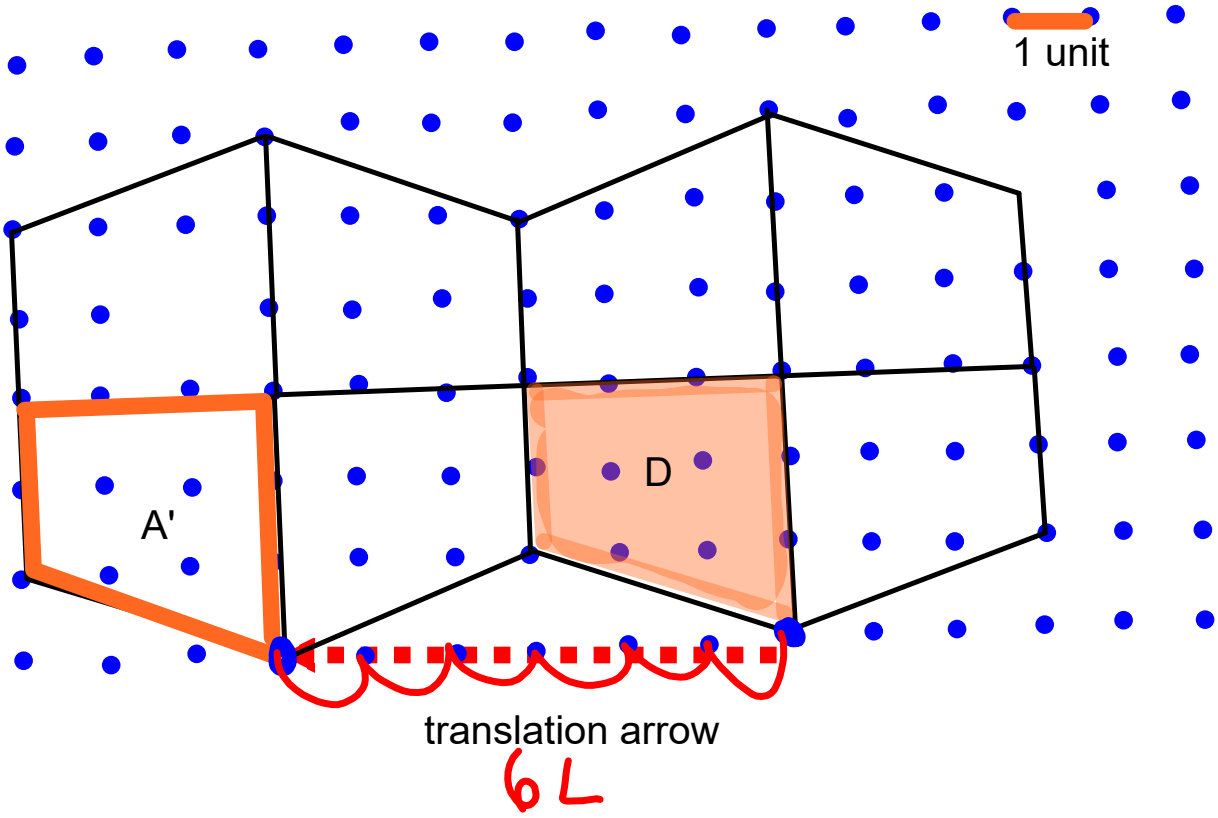
$= -9 + (-8)$

$= -17$

Translation- is a slide of a shape in a straight line

- arrow is used to show the movement

- the translated image and the shaded shape are congruent and have the same orientation



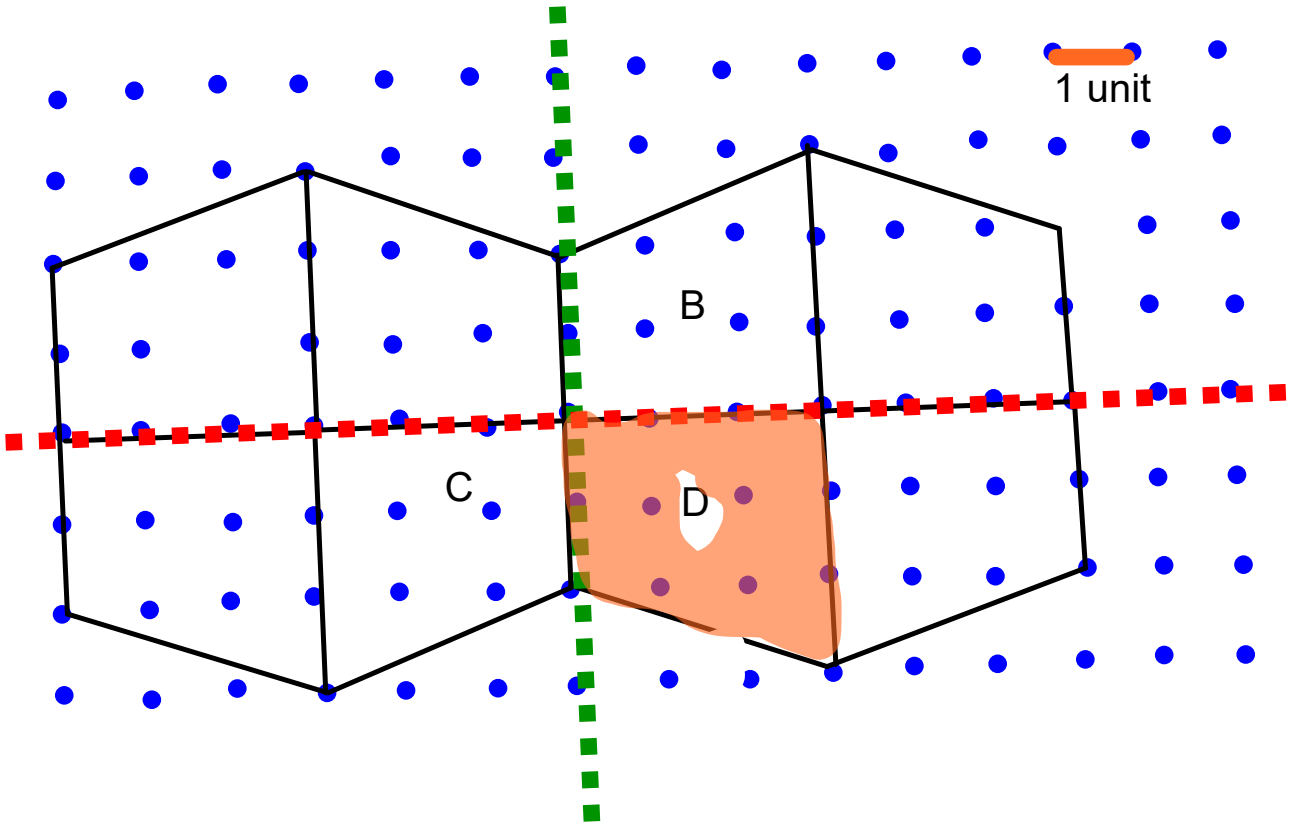
The shaded shape D is translated ___ units ____ to give translated image A'

Reflection- find horizontal line of reflection (marked with red)

*Shape D is reflected in the red line. It reflects image is Shape B

- Find vertical line of reflection (marked with green)

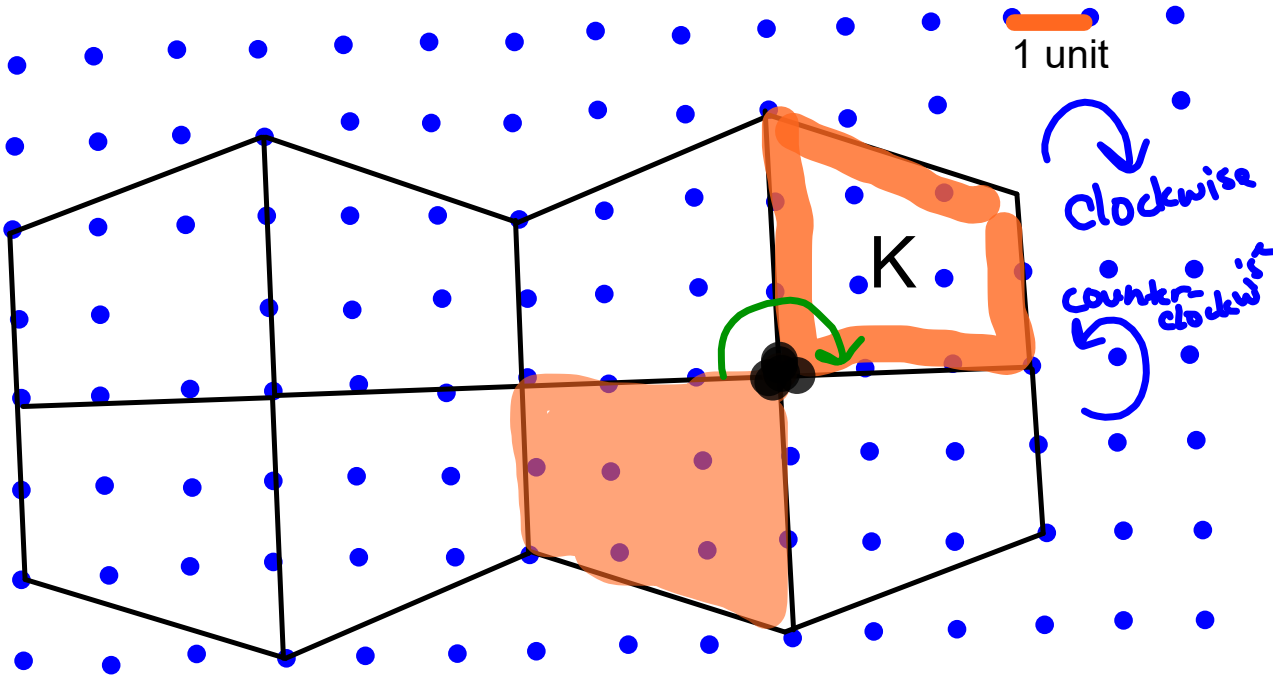
* The shape D is reflected in the green line of reflection. Its reflection image is Shape C



Rotation- need a point of rotation (turn)

- The shaded shape D is rotted 180° clockwise about the point of rotation(marked with a BIG dot). The rotation image is shape K

- rotation image of 180 are congruent



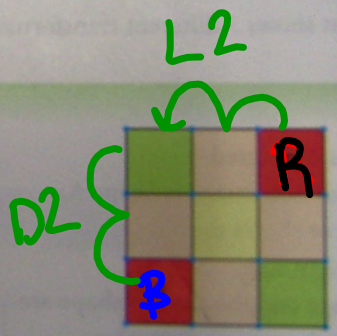
Under any transformation, the original shape and its image are always congruent.

Example 1

Look at this design of squares.
Describe each transformation.

a) a translation for which Square R is an image of Square B

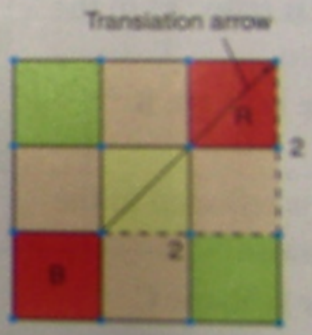
b) a reflection for which Square R is an image of Square B



translation
slide

A Solution

a) Square R is the image of Square B after a translation 2 units right and 2 units up. The translation arrow shows the movement.



Square R is the image of Square B after a reflection in the slanted line. Use a Mira to verify the image.

Look at this design of triangles.
Describe each rotation.

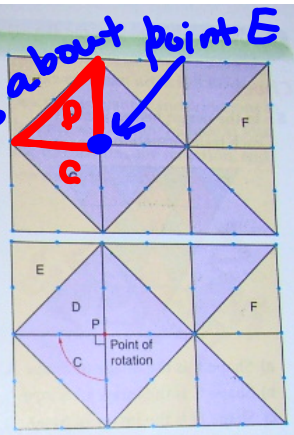
a) a rotation for which Triangle D is an image of Triangle C

b) a rotation for which Triangle F is an image of Triangle E

270° clockwise about point E

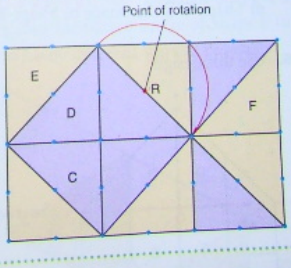
A Solution

a) Triangle D is the image of Triangle C after a rotation of 90° clockwise about P. P is a vertex the two triangles share. The same image is also the result of a rotation of 270° counterclockwise about P.



Solution

b) Triangle F is the image of Triangle E after a rotation of 180° about R. The point of rotation, R, is *not* on the shape being rotated.



Solution

Class/Homework

Look at page 458, 459 Example 1 & 2

Page 460

#5, #6, #7, #8

2

5) a) A → B

Reflection across horizontal mirror between AB

b) A → C

Rotation about point E 180° (clockwise)