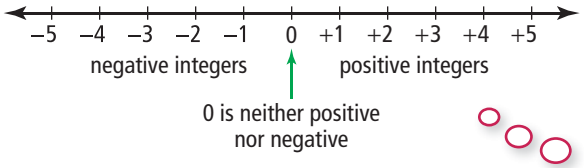
Get Ready

Plot Integers on a Number Line

Integers include positive numbers, negative numbers, and zero.

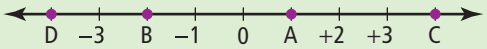
Integers can be shown on a number line.



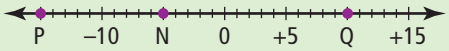
+1 is read as "positive one."
−1 is read as "negative one."

1. For each letter on the number lines, identify the integer.

a)



b)

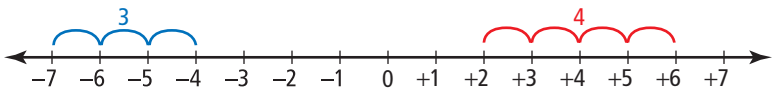


2. a) Draw and label an integer number line by 2s. Plot the following integers on it: 6, 0, −1, 9, −11, −6, 1.

b) List the integers in a) in order from greatest to least.

Find the Distance Between Points on a Number Line

The distance between two points on a number line can be determined by counting.



3. What is the distance between the two numbers placed on a number line?

a) 4 and 10 **b)** −2 and −8

c) −12 and −3 **d)** +7 and −3

e) −12 and 12 **f)** 0 and −11

4. Draw an integer number line.

a) Mark the point that is four less than zero. Label it A.

b) Mark the point that is three more than zero. Label it B.

c) Mark the point that is 6 less than +3. Label it C.

d) Mark the point that is 7 more than −2. Label it D.

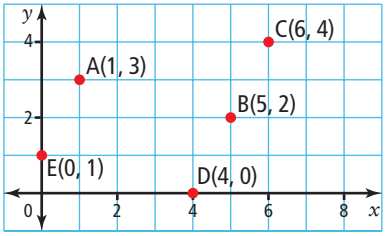
Plot Points on a Coordinate Grid

The points A(1, 3), B(5, 2), C(6, 4), D(4, 0), and E(0, 1) can be plotted on a coordinate grid.

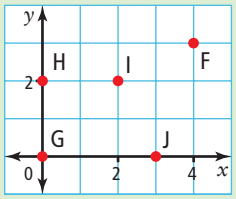
Each point is named with an **ordered pair**.

A(1, 3)

x-coordinate *y*-coordinate



5. State an ordered pair for each point on the coordinate grid.



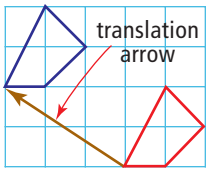
6. **a)** Plot these points on a coordinate grid: A(2, 6), B(3, 2), C(4, 5), D(5, 2), E(6, 6). Join the points in alphabetical order.

b) What letter is formed?

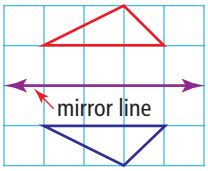
Identify Transformations

A **transformation** moves one geometric figure onto another. Three types of transformations are **translation, reflection,** and **rotation.**

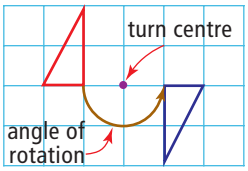
A translation is a slide.



A reflection is a mirror image.

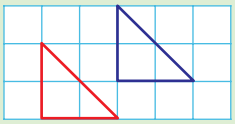


A rotation is a turn.

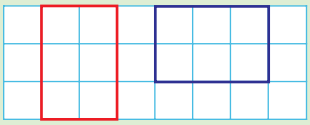


7. What is a transformation that moves the red figure onto the blue figure?

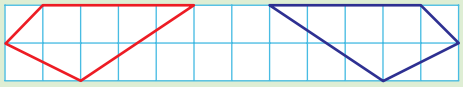
a)



b)

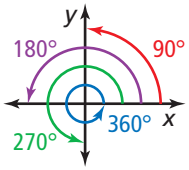


c)



Identify Angles of Rotation

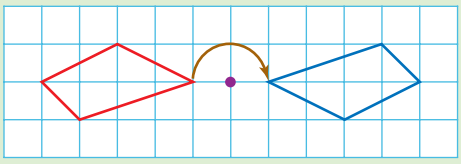
A figure can be turned or rotated any number of degrees.



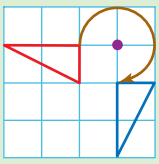
The rotation can be clockwise or counterclockwise.

8. What is the angle of rotation for each of the following rotations? Is the rotation clockwise or counterclockwise?

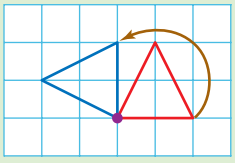
a)



b)



c)



d)