

Activity 8

A	B	C	D	E	F	
$\frac{1}{2}$	$\frac{1}{2}$	$2\frac{1}{2}$	$\frac{5}{8}$	$\frac{1}{2}$	$\frac{2}{3}$	1
$\frac{2}{3}$	$\frac{1}{2}$	1	1	$\frac{1}{2}$	$\frac{1}{2}$	2
$\frac{1}{4}$	-3	$2\frac{1}{2}$	-2	$\frac{1}{4}$	-3	3
$1\frac{2}{3}$	$4\frac{1}{2}$	$3\frac{1}{2}$	$\frac{1}{5}$	$1\frac{2}{3}$	$4\frac{1}{2}$	4
$\frac{1}{2}$	$\frac{2}{3}$	$2\frac{1}{2}$	$\frac{5}{8}$	$\frac{1}{2}$	$\frac{1}{2}$	5
$\frac{1}{2}$	$\frac{1}{2}$	1	1	$\frac{2}{5}$	$\frac{1}{2}$	6

Solve each equation.

  $3x - 2 = 2x - 3$

  $3 - 4x = -4 - 2x$

  $-5x - 3 = 3 - 3x$

  $-2(3 - x) = -(x + 1)$

  $2 - (x + 4) = x - 3$

  $5 - 3(1 - 2x) = x - 3 - 3x$

  $x(3 - 2x) = -2x(x - 3) + 6$

  $(x^2 - 2) - (x^2 + x) = 10 - (3 - x)$

  $\frac{x}{2} - \frac{2x}{5} = \frac{1}{4}$

  $2(1 - x) = 3(-x + 1)$

  $-2x + 3(-1 + x) = x - (2x + 4)$

  $x^2 - 2(3 - 2x) = -x(5 - x)$

  $3x - x(4x + 5) = -x(x + 4) - 3x^2 - 5$

  $-\frac{3x}{4} + \frac{3}{8} = \frac{3}{16}$

  $\frac{3}{x} - 5 = 5 + \frac{5}{x}$

Activity 14

Compute the value of  $y$  for each expression using the given value of  $x$ . Then write the given value of  $x$  and the computed value of  $y$  as an ordered pair of numbers  $(x,y)$ .

$x$	$y$	
-4	$y = 2(x + 5) - 2$	A ( ____, ____)
0	$y = 3 - 2x + (-3)$	B ( ____, ____)
4	$y = -x + 2(x - 2)$	C ( ____, ____)
-6	$y = x - 2(x + 2)$	D ( ____, ____)
-2	$y = 3(x + 1) - 2(x - 1) - 1$	E ( ____, ____)
2	$y = x^2 - 2x + 2$	F ( ____, ____)
6	$y = -(x - 4) + 2(-4 + x)$	G ( ____, ____)
-6	$y = x^2 + 7x + 12$	H ( ____, ____)
-2	$y = -(x + 2) + 2(1 - x)$	I ( ____, ____)
0	$y = (x - 2)(-2 + x)$	J ( ____, ____)
2	$y = -2(x - 2) + 3(x + 1) - 3$	K ( ____, ____)
6	$y = x^2 - 6x + 6$	L ( ____, ____)

Locate the ordered number pairs as points in the coordinate plane and label each point with its corresponding letter.

Draw segments  $\overline{AB}$ ,  $\overline{BC}$ ,  $\overline{AD}$ ,  $\overline{BE}$ ,  $\overline{BF}$ ,  $\overline{CG}$ .

Draw segments  $\overline{DE}$ ,  $\overline{EF}$ ,  $\overline{FG}$ ,  $\overline{DH}$ ,  $\overline{DI}$ ,  $\overline{EI}$ ,  $\overline{HI}$ .

Draw segments  $\overline{JI}$ ,  $\overline{JK}$ ,  $\overline{FK}$ ,  $\overline{KL}$ ,  $\overline{KG}$ ,  $\overline{GL}$ .

Shade or color regions ADEB, BFGC, DHI, EIJKF, KLG.

Activity 14

The design you have drawn is symmetrical with the Y axis as the axis of symmetry. Now, form another symmetrical design that is a mirror image of the original design. It will have the X axis as the axis of symmetry. For example, locate point  $H_1(-6,-6)$  as the mirror image of  $H(-6,6)$ , and so on.

Shade or color the rest of the design by the same pattern used in the original design.

