

# MasterMath

## The Distance and Midpoint Formulas

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Find the distance between these points:

If necessary, round your answers to the nearest 100th.

| Point 1 | Point 2   | Distance |
|---------|-----------|----------|
| (3, 4)  | (5, 6)    | 2.83     |
| (-1, 3) | (5, 2)    | 6.08     |
| (6, -2) | (-4, 7)   | 13.45    |
| (5, -5) | (-3, 2.5) | 8.54     |

2. Find the midpoint of the line between these points:

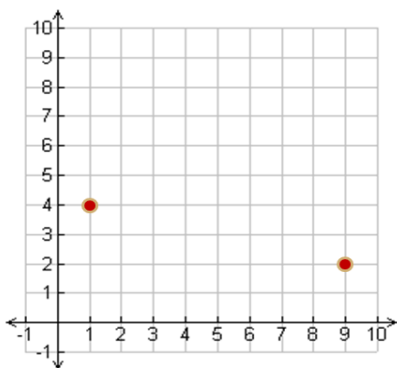
| Point 1 | Point 2   | Midpoint |
|---------|-----------|----------|
| (3, 4)  | (5, 6)    | (4, 5)   |
| (-1, 3) | (5, 2)    | (2, 2.5) |
| (6, -2) | (-4, 7)   | (1, 2.5) |
| (5, -5) | (-3, 2.5) | (1, 1)   |

3. The distance between  $(x, -6)$  and  $(-5, 2)$  is 10. What does  $x$  equal?

1 or -11

Hint:  $x$  could have more than one value.

4. What is the length of the line segment between these points? What are the coordinates of the midpoint of the line segment?



| length      | midpoint |
|-------------|----------|
| $\sqrt{68}$ | (5, 3)   |

5.  $M$  is the midpoint of line segment  $AB$ . The coordinates of  $A$  are  $(-2, 3)$  and the coordinates of  $M$  are  $(1, 0)$ . Find the coordinates of  $B$ .

(4, -3)