

**CYU 1.3 Midpoint & Distance Formulas**

*Use when you get it right all by yourself*  
**S** *Use when you did it all by yourself, but made a silly mistake*  
**H** *Use when you could do it alone with a little help from teacher or peer*  
**G** *Use when you completed the problem in a group*  
**X** *Use when a question was attempted but wrong (get help)*  
**N** *Use when a question was not even attempted*

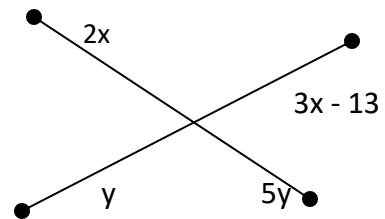
CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Midpoint Formula		5, 6, 7, 8	9
Distance Formula	1 – 4,	10	
Bisect, midpoint, congruent, coordinate plane, perimeter	1 – 7, 10	8, 9	

- Plot the points in a coordinate plane. Then determine whether  $\overline{AB}$  and  $\overline{CD}$  are congruent.  
A(- 4, 5), B (- 4, 8), C(2, - 3), D(2, 0)
  
- Plot the points in a coordinate plane. Then determine whether  $\overline{AB}$  and  $\overline{CD}$  are congruent.  
A(6, - 8), B(6, 1), C(7, - 2), D(- 2, - 2)
  
- Plot the points in a coordinate plane. Then determine whether  $\overline{AB}$  and  $\overline{CD}$  are congruent.  
A(- 5, 6), B(- 5, - 1), C(- 4, 3), D(3, 3)
  
- Plot the points in a coordinate plane. Then determine whether  $\overline{AB}$  and  $\overline{CD}$  are congruent.  
A(10, - 4), B(3, - 4), C(- 1, 2), D(- 1, 5)
  
- PS = 3x + 2, SQ = 4x - 5, PQ = 39u. Is S the midpoint of  $\overline{PQ}$ ? Justify your answer.

6. Suppose Q is the midpoint of  $\overline{PR}$ .  $PQ = 3x - 5$  and  $QR = x + 17$ . Find the value of x. What length should PS have if R is to be the midpoint of  $\overline{QS}$ ?

7. M is the midpoint of AB. If  $AM = 2x^2 + 16$ ,  $AB = 6x^2$ , find AB.

8. Find the value of x and y that makes AB and CD bisect each other.



9. If A is (-3, 5) and M is (7, -12) then find B if M is the midpoint of B.

10. Find the perimeter of a triangle with coordinates (5, 6) (8, -4) and (12, 10).  
*Leave your answer exact and simplified.*

**CYU Reflection:** *How far can you go: basic, intermediate, or advanced?*

**Rate your mastery level!**

How confident are you with the skills this CYU covered? Circle the score you would give yourself.

