

BE-1B TUESDAY 1-23-07

AHSGE WORKBOOK

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52	2
53	5
60	1
60	2

①

MIDPOINT
OF A
LINE

the center of a
line segment



LINE SEGMENT



RAY



LINE



CAN you find the center, (Midpoint)
of a line segment given the
coordinates of the end points?

NOTE: THE AVERAGE OF 2 numbers
is THE SUM OF THE 2
numbers divided by 2.

ex) AVERAGE OF 4 AND 6
is $\frac{4+6}{2} = 5$

MIDPOINT FORMULA

GIVEN ANY TWO POINTS (X_1, Y_1) , (X_2, Y_2)

the coordinates OF THE

midpoint $M = \left(\frac{X_1 + X_2}{2}, \frac{Y_1 + Y_2}{2} \right)$

↑
MIDPOINT

↑
AVERAGE OF
the X 's

↑
AVERAGE
OF
the Y 's

(3)

EX) Find the Midpoint of
(7, 1) AND (-3, 1)

 x_1, y_1 x_2, y_2

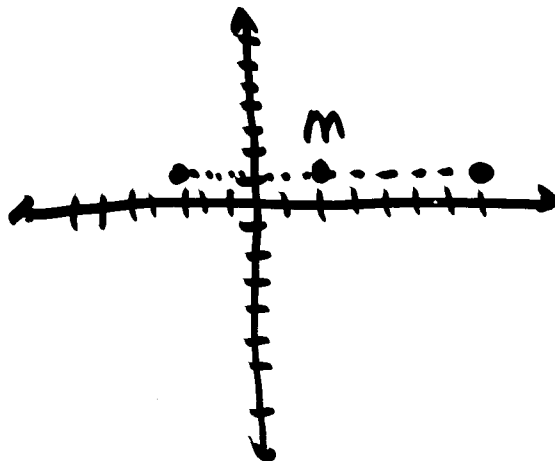
$$M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

$$M = \left(\frac{7 + (-3)}{2}, \frac{1 + 1}{2} \right)$$

$$M = \left(\frac{4}{2}, \frac{2}{2} \right)$$

$M = (2, 1)$

 Is this reasonable?



Your turn:

Find the midpoint of
 $(6, 8)$, $(-2, -12)$

Homework/classwork

Pg. 845 Lesson 11-5

Find the distance between
AND THE midpoint for EACH
PAIR OF POINTS in #1 to 10
