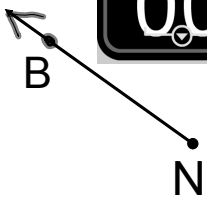
9-16-14

1. Give the name of

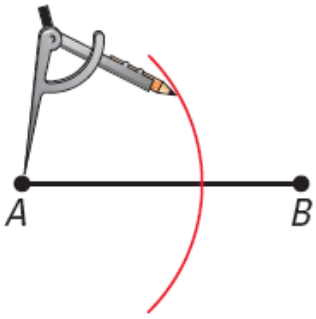


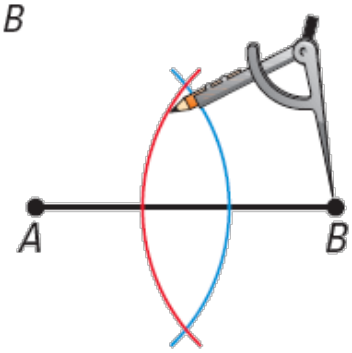
NB

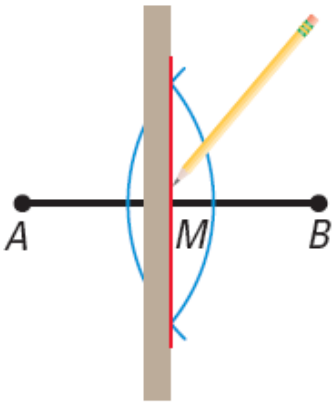
2. Draw a picture of **plane *ABC***

3. Tell your neighbor what you think BISECT means.

Construction of a segment bisector and midpoint

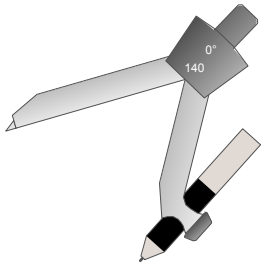






ge·om·e·try

Earth measure



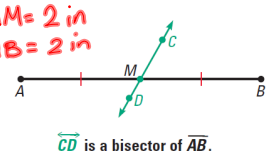
1. Draw a segment.
2. Place compass on 1 endpoint.
3. Make arc more than 1/2 way across segment.
4. Repeat at other end.
5. Connect the 2 intersections.

2.1 - Segment Bisectors

Bisect - cut into 2 equal pieces

Segment Bisectors - a segment, line, or ray that cuts a segment into 2 equal pieces

AM = 2 in
MB = 2 in



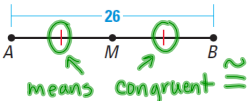
$\overleftrightarrow{CD}$ is a bisector of $\overline{AB}$.

AM - means the length of $\overline{AM}$ (without — means it's a length)

Midpoint - the point where the segment is bisected

Ex. 1 M is the midpoint of $\overline{AB}$. Find AM and MB.

Congruent ≅
Same length
Same measure

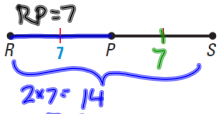


means Congruent ≅

$AM = \frac{26}{2} \rightarrow 13$

$MB = \frac{26}{2} \rightarrow 13$

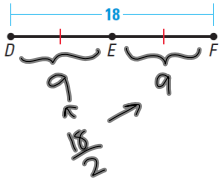
Ex. 2 P is the midpoint of $\overline{RS}$. Find PS and RS.



$2 \times 7 = 14$
$7 + 7$

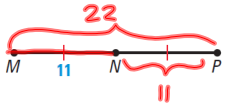
PS: length of $\overline{PS}$

1. Find DE and EF.

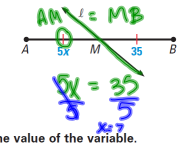


$\frac{18}{2}$

2. Find NP and MP.



Ex. 3 Line ℓ is a segment bisector of $\overline{AB}$. Find the value of x.



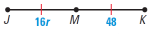
$35 \div 5 =$

$7 \quad x = 7$

$\frac{5x}{5} = \frac{35}{5}$

$x = 7$

***M* is the midpoint of $\overline{JK}$. Find the value of the variable.**



$\frac{16r}{16} = \frac{48}{16}$

$r = 3$

Midpoint Formula: $\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$

between the points (x_1, y_1) and (x_2, y_2)

A B

Find the coordinates of the midpoint of $\overline{AB}$.

a. $A(1, 2)$, $B(7, 4)$ **b.** $A(-2, 3)$, $B(5, -1)$

$x_1\ y_1\ x_2\ y_2$

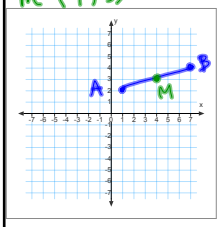
x, y

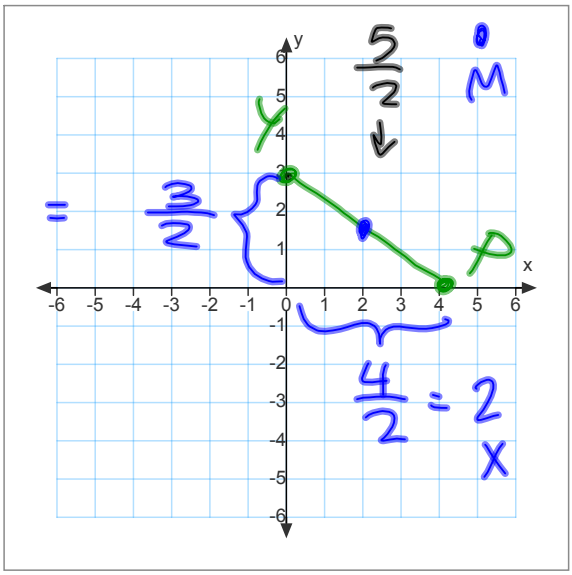
$m = \left(\frac{1+7}{2}, \frac{2+4}{2}\right)$

$m = \left(\frac{8}{2}, \frac{6}{2}\right)$

$m = (4, 3)$

$\left(\frac{3}{2}, 1\right)$ or $(1.5, 1)$





$y = \frac{3}{2}x$

$\frac{5}{2}$

$\frac{4}{2} = 2$

0 M P

label the midpoint

• M

$\frac{3+4}{2}$ ← guess

$\frac{7}{2}$ ↙

Due tomorrow:

2.1 pg. 57-59

#17-23 odd, 24, 27-35 odd, 42, 53

Section 2.1

First & Last Name