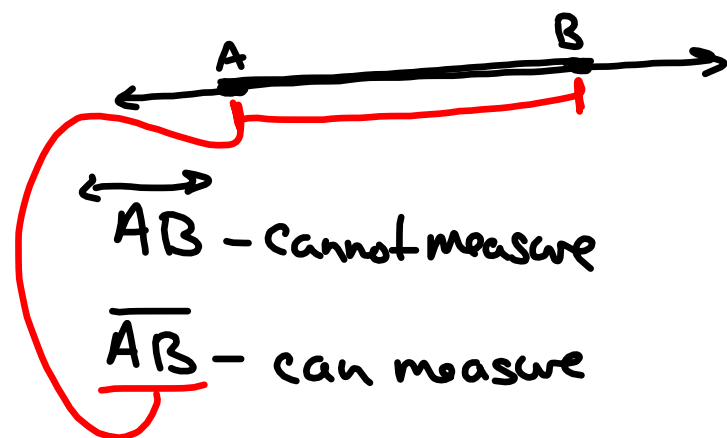


Section 1.4 Finding the Measure of Segments

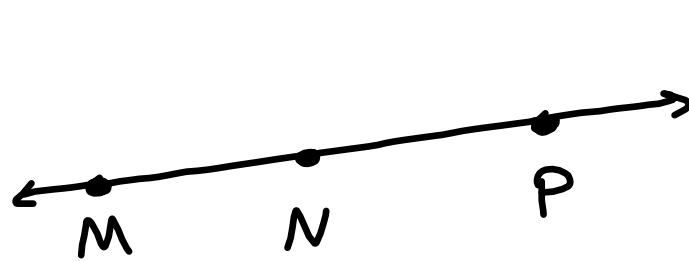
Obj: Find the distance between two points

- 1) on a number line
- 2) two points in a coordinate plane



\overline{AB} - segment AB

AB - measure of AB

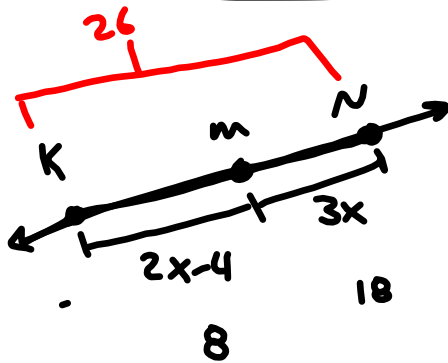

 \overline{MP}


Endpoints at M and P

N is a point that falls between M and P

Question: if I took $\overline{MN} + \overline{NP} = \overline{MP}$

Segment Addition Postulate - the sum of the parts equals the sum of the whole segment.



$$2x-4+3x=26$$

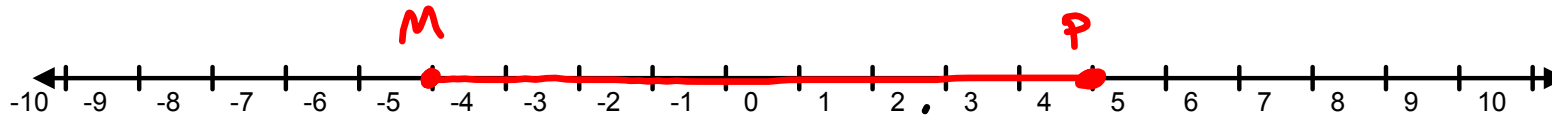
$$5x-4=26$$

$$+4 +4$$

$$5x=30$$

$$\div 5 \div 5$$

$$\boxed{x=6}$$

Number Line

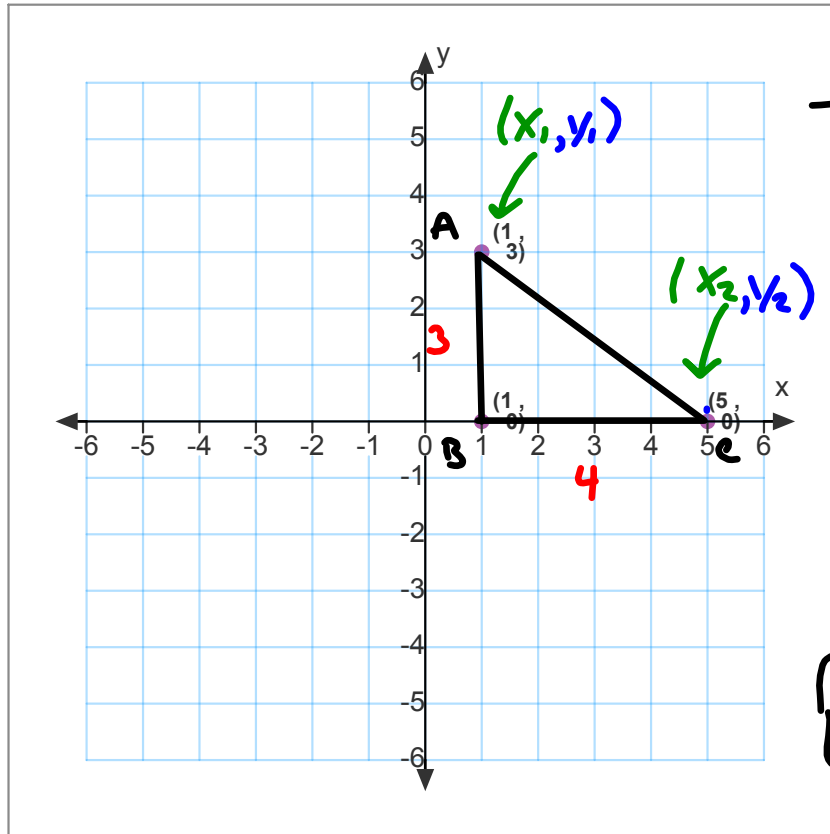
How long is \overline{MP} ?

1) count the units

2) Subtract endpoints and find absolute value

$$|-5 - 4| = |-9| = 9$$

$$4 - (-5) = |9| = 9$$



Distance Formula

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$d = \sqrt{(5 - 1)^2 + (0 - 3)^2}$$

$$d = \sqrt{(4)^2 + (-3)^2}$$

$$d = \sqrt{16 + 9}$$

$$d = \sqrt{25}$$

$$d = 5 \text{ units}$$

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1-3 all

20-44 even

59

$$-3^2$$
$$-9$$

vs $(-3)^2$

9