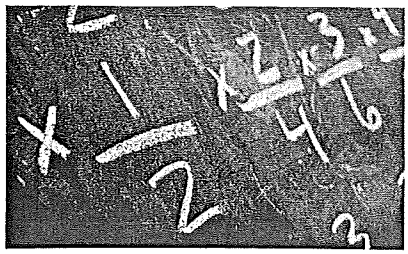
Geometry Notes: 1-2; *Linear Measure*

Name Key Date 9/10/15



Line Segment: (segment) can be measured because it has two endpoints, ~~A segment wi endpoints A and B~~ ↙ No Arrows

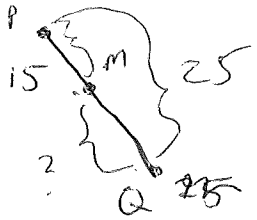
Line segment AB is written $\overline{AB}$ or $\overline{BA}$. The *length* of $\overline{AB}$ is written AB.

$\overline{AB}$ is a segment (a thing)!!!; AB is a measure (a number)!!!

Example: In the figure below, if PM=10 and MQ=20, find PQ.

PM + MQ = PQ
10 + 20 = 30

Example: If PM=15 and PQ=25, find QM.



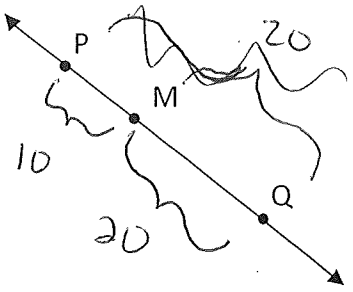
PM + MQ = PQ
15 + MQ = 25
-15 -15
MQ = 10

Betweenness of points: Point M is **between** P and Q if and only if (iff):

1. Points P, Q and M are collinear

AND

2. PM + MQ = PQ



Example 1: Find *x* and ST if T is between S and U, ST=7*x*, SU=45, and TU=5*x*-3.

ST + TU = 45

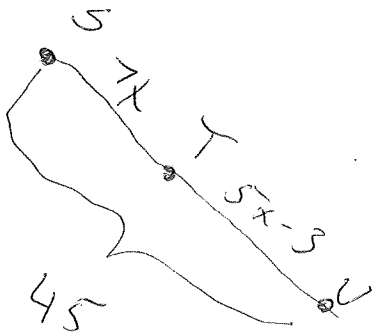
7x + (5x - 3) = 45

12x - 3 = 45

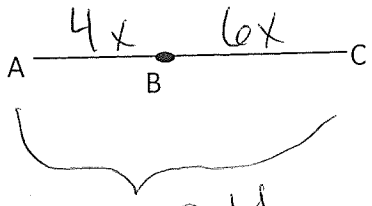
12x = 48

x = 4

(ST = 28)



Example 2:



If AB= 4*x*, BC= 6*x*, and AB= 24, find *x* and BC.

$x = 6$

$BC = 36$

$4x = 24$

$x = 6$

$6(6) = 36$

~~4x + 6x =~~

$4x + 24 = 4x$

Construction: Accurately creating geometric figures without measuring tools

***Most methods use only a pencil, straight edge, and/or a compass.