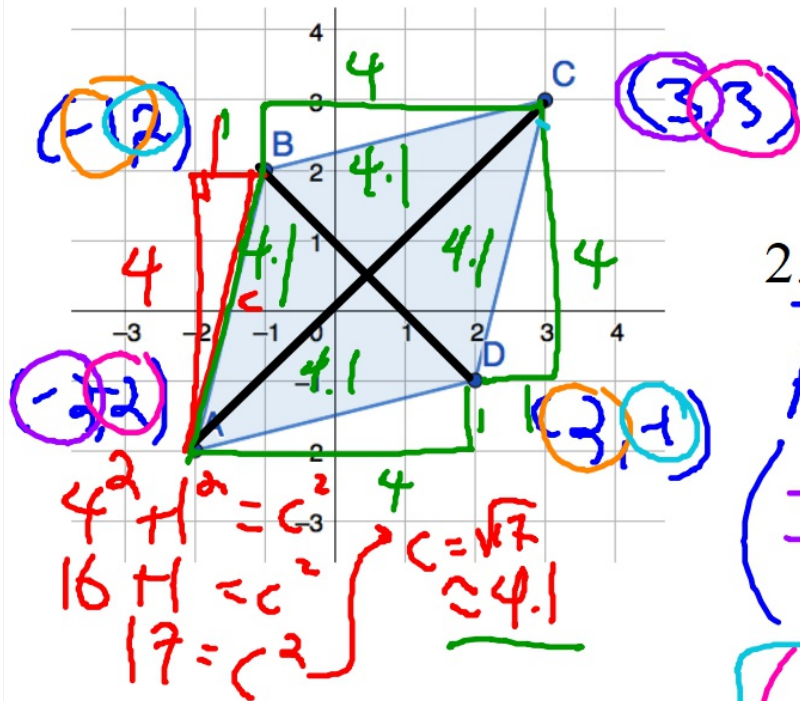


Good morning: attach warm up, then do 1 and 2

1. A rhombus is a quadrilateral with 4 congruent sides. Is ABCD a rhombus? Use numerical evidence to support your claim.

yes, all sides measure 4.1



2. Find the midpoints of \overline{AC} and \overline{BD} .

$\overline{AC}_{\text{mid}}$

$$\left(\frac{-2+3}{2}, \frac{-2+3}{2} \right)$$

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

$\overline{BD}_{\text{mid}}$

$$\left(\frac{-1+2}{2}, \frac{1}{2} \right)$$

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

Finishing up foundations of geometry

- undefined terms
- line segments, arcs, rays, angles, angle sets
- Cartesian geometry: distance, midpoint
- constructions: equilateral triangle, perpendicular bisector

Putting it together:

M is the midpoint of \overline{AB} .

Suppose $\overline{AM} = 3x+6$ and $\overline{AB} = 2x+8$.

Find the length of \overline{AB} .



$$3x+6 + 3x+6$$

$$6x+12 = 2x+8$$
$$\underline{-2x} \quad \underline{-2x}$$

$$4x+12 = 8$$
$$\underline{-12} \quad \underline{-12}$$

$$4x = -4$$

$$x = -1$$

$$2(-1)+8$$

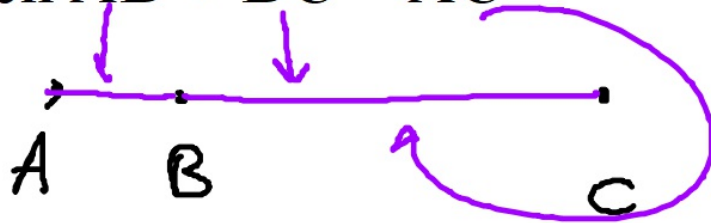
$$-2+8$$

$$6$$

The Segment Addition Postulate*

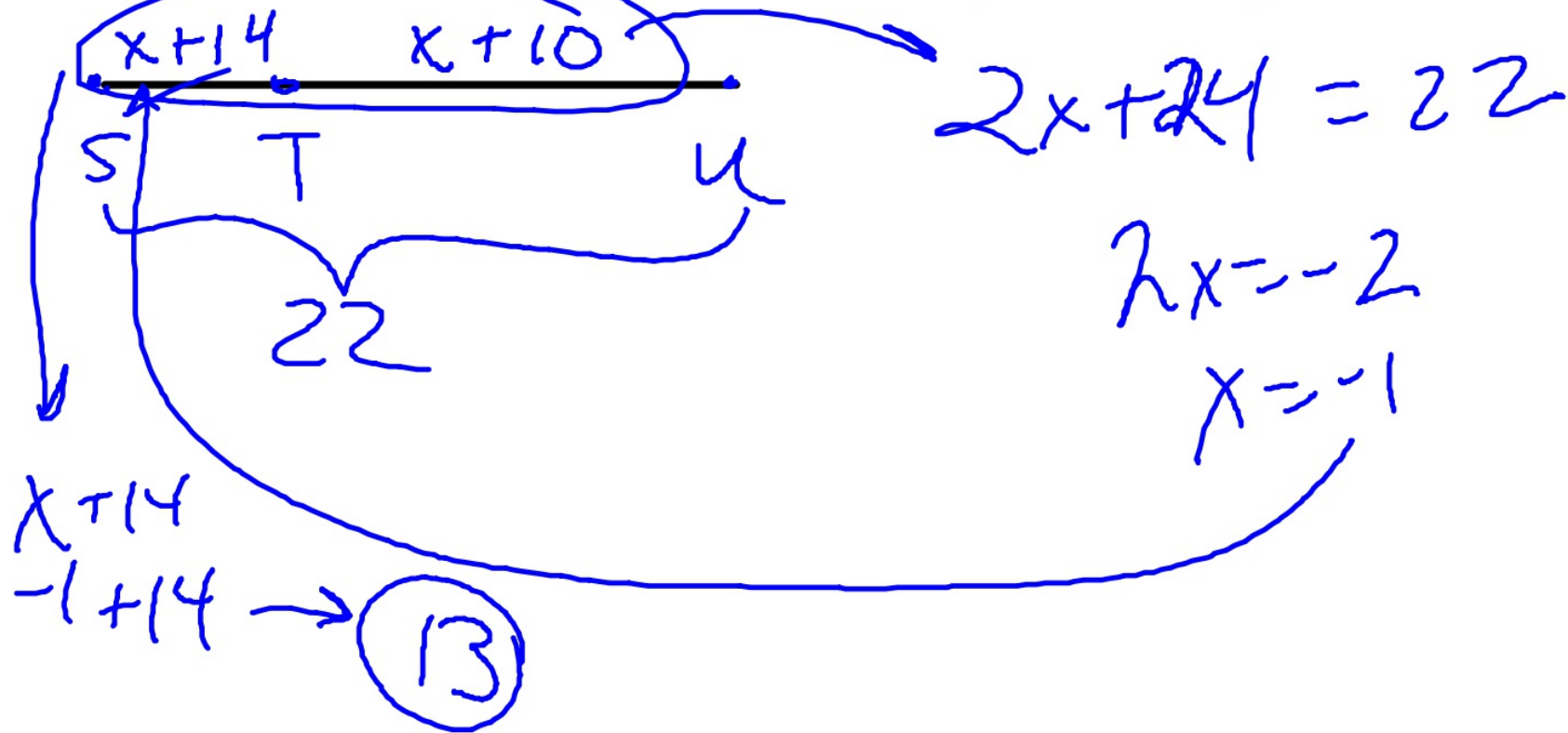
*basic assumption

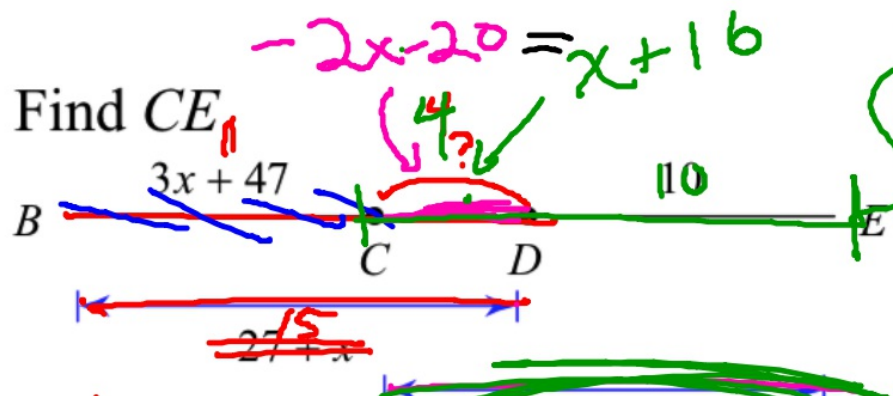
Suppose points A, B, and C are collinear and B is between A and C
Then $AB + BC = AC$



Suppose T is between S and U.

If $ST = x+14$ and $SU = 22$, and $TU = x+10$, find the length of ST.





14

$$\begin{array}{r}
 -2x - 20 = x + 16 \\
 -x + 20 \quad \underline{\quad} \quad \underline{\quad} \\
 \hline
 -3x = 36 \\
 \hline
 x = -12
 \end{array}$$

$$\begin{array}{r}
 27 + x - (3x + 47) \\
 \hline
 27 + x - 3x - 47 \\
 \hline
 -2x - 20
 \end{array}$$

Riddle Cards

Remember the sketch artist game?

Your group gets a set of clues (identical). Each describes a geometric figure and you have to find the unique solution.



Assessment questions on constructions:

- equilateral triangle
- perpendicular bisector
- angle bisector
- angle copy

The Practice Assessment!

- try it first, like a real test
- then look at your notes to answer those you don't understand
- THEN check solutions at mgeo.weebly.com
- check out help videos there too