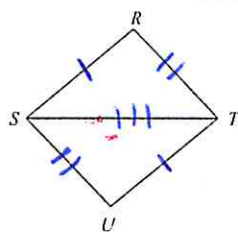


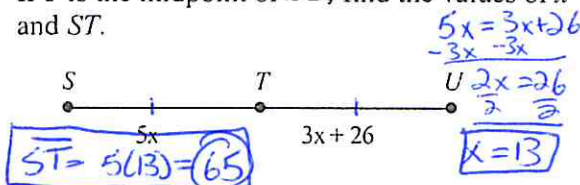
26. Given: $\overline{RS} \cong \overline{UT}$ and $\overline{RT} \cong \overline{US}$

Prove: $\triangle RST \cong \triangle UTS$



By the reflexive prop,
 $\overline{ST} \cong \overline{ST}$.
Then $\triangle RST \cong \triangle UTS$
by SSS.

27. If T is the midpoint of $\overline{SU}$, find the values of x and ST .



$$\overline{ST} = 5(13) = 65$$

$$x = 13$$

28. Given $\triangle QRS \cong \triangle TUV$, $QS = 4v + 3$, and $TV = 8v - 9$, find the length of QS and TV .

$$QS = TV \rightarrow 4v + 3 = 8v - 9$$

$$QS = 4(3) + 3 = 15$$

$$TV = 8(3) - 9 = 15$$

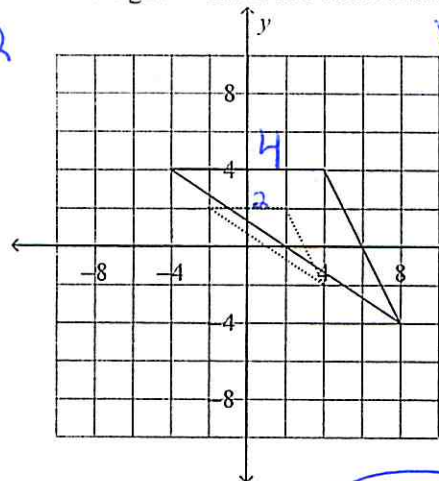
$$3 = v$$

29. Name the Property of Equality that justifies the statement:

If $m = n$, then $n = m$.

Symmetric Property

30. The dashed triangle is a dilation image of the solid triangle. What is the scale factor?



We start with big triangle and go to small, so our number must be a $\frac{1}{2}$ fraction (reduction).

31. $\angle 1$ and $\angle 2$ are supplementary angles. add to $m\angle 1 = x - 39$, and $m\angle 2 = x + 81$. Find the measure of each angle.

$$m\angle 1 + m\angle 2 = 180^\circ$$

$$x - 39 + x + 81 = 180^\circ$$

$$2x + 42 = 180^\circ$$

$$2x = 138^\circ$$

$$x = 69^\circ$$

$$m\angle 1 = x - 39$$

$$m\angle 1 = 69 - 39$$

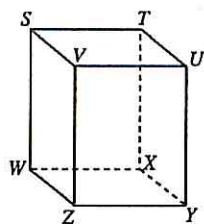
$$m\angle 1 = 30^\circ$$

$$m\angle 2 = x + 81$$

$$m\angle 2 = 69 + 81$$

$$m\angle 2 = 150^\circ$$

32. What is the intersection of plane $WXYZ$ and plane $VUYZ$?



$$\overline{ZY}$$

$$EF + FG = EG$$

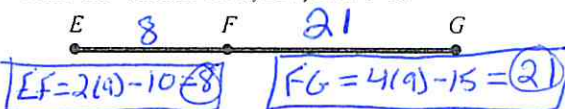
$$2x - 10 + 4x - 15 = 29$$

$$6x - 25 = 29$$

$$6x = 54$$

$$x = 9$$

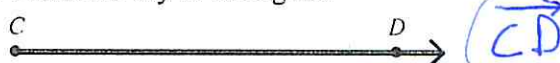
33. If $EF = 2x - 10$, $FG = 4x - 15$, and $EG = 29$, find the values of x , EF , and FG .



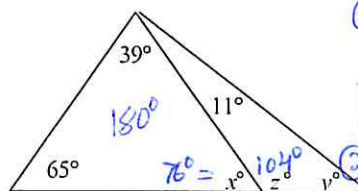
$$EF = 2(9) - 10 = 8$$

$$FG = 4(9) - 15 = 21$$

34. Name the ray in the figure.



35. Find the values of x , y , and z .



$$x + 65 + 39 = 180^\circ$$

$$x + 104 = 180^\circ$$

$$x = 76^\circ$$

$$x + z = 180^\circ$$

$$76 + z = 180^\circ$$

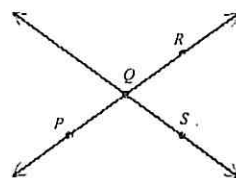
$$z = 104^\circ$$

$$y + 104 + 11 = 180^\circ$$

$$y + 115 = 180^\circ$$

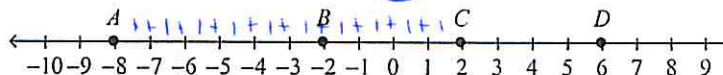
$$y = 65^\circ$$

36. Are R , Q , and P collinear? If so, name the line on which they lie.

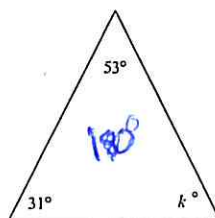


Yes, $\overline{RP}$.

37. Find the length of AC .



38. Find the value of k .



$$k + 53 + 31 = 180^\circ$$

$$k + 84 = 180^\circ$$

$$k = 96^\circ$$