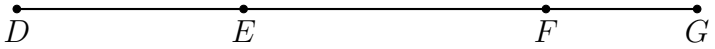
Name:

BECA / Dr. Huson / Geometry 03 Parallels and transversals

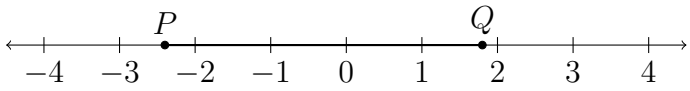
3.4 Transversals and review

1. Do Now: Given $\overline{DEFG}$, $DE = 3\frac{1}{4}$, $EF = 6\frac{1}{4}$, and $FG = 1\frac{3}{4}$. (diagram not to scale)

   Find DG, expressed as a fraction, not a decimal.

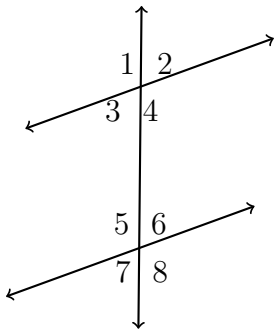


2. Do Now: Given $P(-2.4)$ and $Q(1.8)$, as shown on the number line. Find the length of the line segment $\overline{PQ}$.



3. Spicy Do Now: Solve for x, $x^2 + 10x + 7 = 2x$

4. Given two parallel lines and a transversal, as shown, with $m\angle 6 = 68°$. Write down the value of each angle measure.

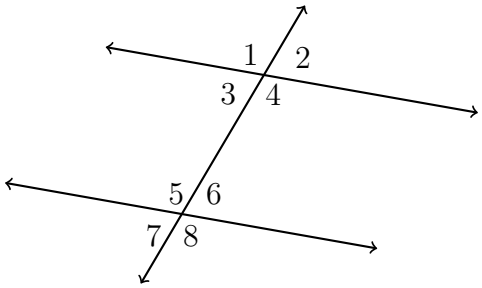


   (a) What angle is corresponding to $\angle 6$?

   (b) What angle is alternate interior to $\angle 4$?

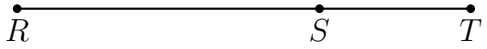
   (c) Find $m\angle 1$

5. Given two parallel lines and a transversal, with $m\angle 3 = 18(x-1)$ and $m\angle 5 = 18(x+1)$. Find $m\angle 1$. (First write an equation, and solve for x)



6. Given $\overline{RST}$, $RS = 5\frac{3}{4}$, and $RT = 8\frac{3}{8}$.

   (a) Find ST as a fraction.



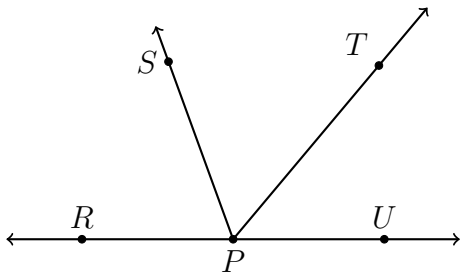
   (b) The postulate used in this problem is the _____.

7. Given the situation in the diagram, answer each question. Circle True or False.

   (a) T or F: $\overrightarrow{PU}$ and $\overrightarrow{PT}$ are opposite rays.

   (b) T or F: $\angle RPT$ and $\angle SPU$ are adjacent angles.

   (c) T or F: $\angle TPU$ is an acute angle.



8. Given isosceles $\triangle XYZ$ with $\overline{XY} \cong \overline{YZ}$. On the diagram mark the congruent line segments with tick marks.