Lesson 9 Practice Problems

1. Andre says that $10x + 6$ and $5x + 11$ are equivalent because they both equal 16 when x is 1. Do you agree with Andre? Explain your reasoning.

2. Select **all** expressions that can be subtracted from $9x$ to result in the expression $3x + 5$.

   A. $-5 + 6x$

   B. $5 - 6x$

   C. $6x + 5$

   D. $6x - 5$

   E. $-6x + 5$

3. Select **all** the statements that are true for any value of x.

   A. $7x + (2x + 7) = 9x + 7$

   B. $7x + (2x - 1) = 9x + 1$

   C. $\frac{1}{2}x + (3 - \frac{1}{2}x) = 3$

   D. $5x - (8 - 6x) = -x - 8$

   E. $0.4x - (0.2x + 8) = 0.2x - 8$

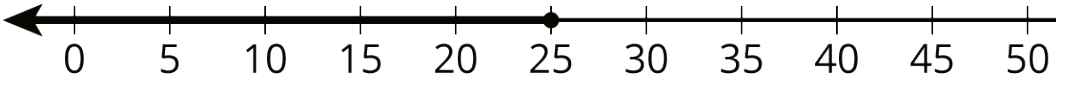
   F. $6x - (2x - 4) = 4x + 4$

4. For each situation, would you describe it with $x < 25$, $x > 25$, $x \leq 25$, or $x \geq 25$?

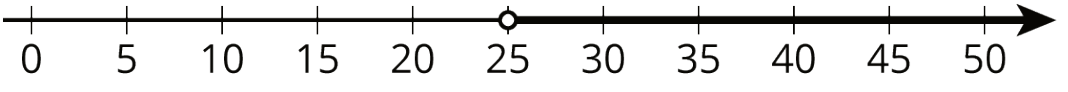
   a. The library is having a party for any student who read at least 25 books over the summer. Priya read x books and was invited to the party.

   b. Kiran read x books over the summer but was not invited to the party.

   c.



   d.

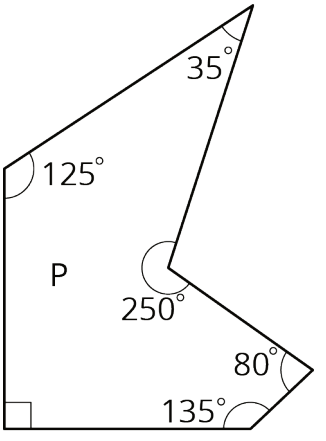


(From Unit 4, Lesson 3.)

5. A line is represented by the equation $\frac{y}{x-2} = \frac{3}{11}$. What are the coordinates of some points that lie on the line? Graph the line on graph paper.

(From Unit 2, Lesson 17.)

6. Select **all** the statements that must be true for *any* scaled copy Q of Polygon P.



A. The side lengths are all whole numbers.

B. The angle measures are all whole numbers.

C. Q has exactly 1 right angle.

D. If the scale factor between P and Q is $\frac{1}{5}$, then each side length of P is multiplied by $\frac{1}{5}$ to get the corresponding side length of Q.

E. If the scale factor is 2, each angle in P is multiplied by 2 to get the corresponding angle in Q.

F. Q has 2 acute angles and 3 obtuse angles.

(From Unit 2, Lesson 3.)