A. Answers

$$\begin{array}{ll}
1. = \checkmark & 3. < \checkmark \\
2. > \checkmark & 4. < \checkmark
\end{array}$$

B. Answers

5. < ✓

C. Answers
$$1. 5x - 4 < 38 - x \checkmark$$

$$5x + x - 4 + 4 < 38 + 4 - x + x \checkmark$$

$$\frac{6x}{6} < \frac{42}{6} \checkmark$$

$$\boxed{x < 7} \checkmark$$

$$2. 2x + 34 > 9x - 22 \checkmark$$

$$2x - 9x + 34 - 34 > 9x - 9x - 22 - 34 \checkmark$$

$$\frac{-7x}{-7} > \frac{-56}{-7} \checkmark$$

Activity 4.2.1: Hinge Theorem Total points = 16

x < 8 ✓

C. Answers 1.
$$5x - 4 < 38 - x$$
 1. $5x - 4 < 38 - x$ 1. $5x - 4 < 38 -$

Activity 4.2.1: Hinge Theorem

C. Answers

1.
$$5x - 4 < 38 - x$$

1.
$$5x-4 < 38-x$$

 $5x+x-4+4 < 38+4-x+x$
 $\frac{6x}{6} < \frac{42}{6}$
 $x < 7$

$$2.2x + 34 > 9x - 22$$

2.
$$2x + 34 > 9x - 22$$

 $2x - 9x + 34 - 34 > 9x - 9x - 22 - 34$
 $\frac{-7x}{-7} > \frac{-56}{-7}$

Activity 4.2.1: Hinge Theorem

C. Answers

1.
$$5x-4 < 38-x$$
 \checkmark $5x+x-4+4 < 38+4-x+x$ \checkmark

$$\begin{array}{c|c}
5x + x - 4 + 2 \\
6x < \frac{42}{6} < \frac{\checkmark}{6}
\end{array}$$

$$\frac{|x| < 7}{2.2x + 34} > 9x - 22$$

$$\frac{-7x}{-7} > \frac{-56}{-7} \checkmark$$

2.
$$2x + 34 > 9x - 22$$

 $2x - 9x + 34 - 34 > 9x - 9x - 22 - 34$
 $\frac{-7x}{-7} > \frac{-56}{-7}$
 $x < 8$

1.
$$5x - 4 < 38 - x$$

$$\frac{5x + x - 4 + 4 < 38 + 4 - x + x}{\frac{6x}{6} < \frac{42}{6}} \checkmark$$

$$\frac{6}{6} < \frac{6}{6}$$

1. = ✓

2. > ✓

1. > ✓

2.
$$2x + 34 > 9x - 22$$

2.
$$2x + 34 > 9x - 22$$

 $2x - 9x + 34 - 34 > 9x - 9x - 22 - 34$
 $\frac{-7x}{-7} > \frac{-56}{-7}$

A. Answers

C. Answers

1.
$$5x-4 < 38-x$$

 $5x+x-4+4 < 38+4-x+x$
 $\frac{6x}{6} < \frac{42}{6}$

$$\frac{6}{6} < \frac{42}{6}$$

$$2.2x + 34 > 9x - 22$$

$$2x - 9x + 34 - 34 > 9x - 9x - 22 - 34 \checkmark$$

$$\frac{-7x}{-7} > \frac{-56}{-7} \checkmark$$

Activity 4.2.1: Hinge Theorem

C. Answers 1. 5x - 4 < 38 - x

$$5 \times 1 \times 1 \times 1 \times 20$$

1.
$$5x - 4 < 38 - x$$

 $5x + x - 4 + 4 < 38 + 4 - x + x$
 $\frac{6x}{6} < \frac{42}{6}$
 $x < 7$

$$x < 7$$
 \checkmark 2. $2x + 34$

$$2.2x + 34 > 9x - 22$$

2.
$$2x + 34 > 9x - 22$$

 $2x - 9x + 34 - 34 > 9x - 9x - 22 - 34$
 $\frac{-7x}{-7} > \frac{-56}{-7}$
 $x < 8$

A. Answers

Activity 4.2.1: Hinge Theorem Total points = 16

1.
$$5x - 4 < 38 - x$$

$$5x + x - 4 + 4 < 38 + 4 - x + x$$

$$6x + 42$$

$$6 < 42$$

$$6 < 6$$

$$x < 7$$

$$\frac{6}{6} < \frac{6}{6}$$

$$2.2x + 34 > 9x - 22$$

 $2x - 9x + 34 - 34 > 9x - 9x - 22 - 34$
 $-7x$ -56

$$\frac{-7x}{-7} > \frac{-56}{-7} \checkmark$$

$$\boxed{x < 8} \checkmark$$