

ACE Assignment Guide for Problem 2.2



Core 7

Other 29–43, 58, and unassigned choices from previous problems

Adapted For suggestions about adapting ACE exercises, see the CMP *Special Needs Handbook*.

Connecting to Prior Units 13, 14, 16–18, 29–34, 36–41: *Accentuate the Negative*; 19–28: *Say It With Symbols*; 42: *Covering and Surrounding*; 43: *What Did You Expect?*

Answers to Problem 2.2

A. Examples will vary.

1. $q + 23 < r + 23$. True

2. $q - 35 < r - 35$. True

3. $14q < 14r$. True

4. $-6q < -6r$. False. If $q = 1$, $r = 2$, we get $-6q = -6$ and $-6r = -12$, but -6 is not less than -12 . In fact, the statement is false for all q and r such that $q < r$

5. $\frac{q}{5} < \frac{r}{5}$. true

6. $\frac{q}{-3} < \frac{r}{-3}$ False. Using the values for q and r in number 4, $-\frac{1}{3}$ is not less than $-\frac{2}{3}$.

B. When working with equations, it doesn't matter if you multiply or divide by a negative number or a positive number. When working with inequalities, if you multiply or divide by a negative number, the inequality changes direction. In the case of both inequalities and equations, you can always add or subtract a number from both sides without affecting the inequality.

C. 1. $x = 8$

2. $w > 8$

3. $q = -3$

4. $r < -3$