

## PRACTICE DRILL 20—MANIPULATING INEQUALITIES (MIDDLE AND UPPER LEVELS ONLY)

Solve for  $x$ .

1.  $4x > 16$

2.  $13 - x > 15$

3.  $15x - 20x < 25$

4.  $12 + 2x > 24 - x$

5.  $7 < -14 - 3x$

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**Practice Drill 20—Manipulating an Inequality**

1.  $x > 4$

To isolate  $x$ , divide both sides by 4. The sign doesn't change!

2.  $x < -2$

To isolate  $x$ , subtract 13 from both sides. Then divide both sides by  $-1$ . Since you divided by a negative number, flip the sign.

3.  $x > -5$

First, combine like terms to get  $-5x < 25$ . Then divide both sides by  $-5$ . Since you divided by a negative number, flip the sign.

4.  $x > 4$

To isolate  $x$ , add  $x$  to both sides. Subtract 12 from both sides. Then divide both sides by 3. The sign doesn't change!

5.  $x < -7$

To isolate  $x$ , add  $3x$  to both sides. Subtract 7 from both sides. Then divide both sides by 3. The sign doesn't change!