

SOLVING A TWO-STEP INEQUALITY

SPEED CHALLENGE ONE-STEP INEQUALITIES (2 MINUTES) – Solve Only

A) $x + 4 > 13$

B) $y - 29 < -28$

C) $-23 > z - 7$

What is an inequality?

What does two-step mean?

Procedures to solve a one or two step inequality:

***Step (1) Combine like terms**

***Step (2) Distribute if needed**

***Step (3) Follow the rules of PEMDAS**

***Step (4) Place answer in one of these formats:**

Variable – Symbol – Number or Number – Symbol –
Variable

X > 25 - 14 < Y

****Step (5) IF YOU ARE MULTIPLYING OR DIVIDING BY A NEGATIVE COEFFICIENT, YOU MUST REVERSE THE INEQUALITY SYMBOL FOR THE EQUATION TO STILL BE TRUE. For example: $-3X > 3$ OR $-1/2Y < 16$**

MODEL (Solving a two-step inequality)

a) $2y - 4 > -18$

b) $3 + 3x > -24$

c) $1/4x + 2 < 10$

CHECKING FOR UNDERSTANDING

a) $3x - 4 > 17$

b) $12 + 6x < -18$

c) $3x + 4 + x > 28$

MODEL (Solving and Graphing a two-step inequality)

a) $4k - 10 < 22$

b) $5 + 2x < -9$

c) $48 < 3x + 12$

CHECKING FOR UNDERSTANDING

a) $3x + 1 > 10$

b) $4x + 4 < 52$

c) $29 > 6k - 7$

MODEL (Solving a two-step Distribute Property)

a) $5(x - 6) > 10$

b) $\frac{2}{3}(x - 6) > 12$

c) $2(z - 1) < -22$

CHECKING FOR UNDERSTANDING

a) $3(x + 1) > 10$

b) $\frac{1}{5}(5 + y) > 16$

c) $4(\frac{1}{4}x - 1) < -4$

MODEL (Solving a two-step negative coefficient inequality)

a) $4 - 4x > 20$

b) $-1/6y + 6 < 15$

CHECKING FOR UNDERSTANDING

a) $25 < -3 - 2x$

b) $9 - 7y > -47$

LEVEL 1: Big Ideas page 150 #4 – 6, 8 – 11

LEVEL 2: Big Ideas page 150 #3 – 13

LEVEL 3: Big Ideas page 150 #3 - 18