

$$f(x) = 2x^2 - 3$$

$$g(x) = -5x - 1$$

⇒ "Function Notation"

Find:

① $f(3)$

② $g(-4)$

③ $f(2c)$

④ $g[f(x)]$ or $g \circ f(x)$

① $f(x) = 2x^2 - 3$

② $g(x) = -5x - 1$

$$f(3) = 2(3)^2 - 3$$

$$g(-4) = -5(-4) - 1$$

$$f(3) = 15$$

$$g(-4) = 19$$

③ $f(x) = 2x^2 - 3$

$$f(2c) = 2(2c)^2 - 3 = 2(4c^2) - 3$$

$$f(2c) = 8c^2 - 3$$

④ $g(x) = -5x - 1$

$$g(\quad) = -5(\quad) - 1$$

$$g(2x^2 - 3) = -5(2x^2 - 3) - 1$$

$$g(2x^2 - 3) = -10x^2 + 15 - 1 = -10x^2 + 14 = g(f(x))$$

SOLVING LINEAR (Degree = 1) EQUATIONS $\Rightarrow$ GRE AND INEQUALITIES $\Rightarrow$ GRI

- WHATEVER YOU DO TO ONE SIDE DO TO THE OTHER
- (+GRI $\Rightarrow$ if you $\cdot$ or $\div$ by negative, flip the inequality)

USE $+$, $-$ UNDOES AND $\cdot$, $\div$ UNDOES TO GET VARIABLE BY ITSELF. CHECK SOLUTIONS.

EX

GRE

$$-5x + 3 = 8$$

$$\quad -3 \quad -3$$

$$\frac{-5x}{-5} = \frac{5}{-5}$$

$$x = -1$$

$$\text{CK } -5(-1) + 3 \stackrel{?}{=} 8$$

$$5 + 3 \stackrel{?}{=} 8 \checkmark$$

ONE SOLUTION —
ONLY ONE CHECK

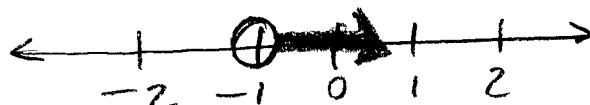
GRI

$$-5x + 3 < 8$$

$$\quad -3 \quad -3$$

$$\frac{-5x}{-5} < \frac{5}{-5}$$

$$x > -1$$



$\leftarrow$ FALSE $\circ$ TRUE $\rightarrow$

$$\text{CK FALSE } (-2) > -1 \text{ FALSE } \checkmark$$

$$\text{FALSE } (-1) > -1 \text{ FALSE } \checkmark$$

$$\text{FALSE } (2) > -1 \text{ TRUE } \checkmark$$

∞ SOLUTIONS, CAN ONLY
"SPOT" CHECK, USE 1 NUMBER IN
false, equals, & true region.

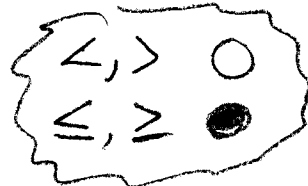
NOTES — GET VARIABLE ON LEFT WHEN DONE.

$$3 = x$$

$$x = 3$$

$$3 \geq x$$

$$x \leq 3$$



↑ "POINTS" CORRECTLY



- PRACTICE:
- EVALUATING FUNCTIONS
 - SOLVING LINEAR EQUATIONS
 - SOLVING LINEAR INEQUALITIES
- (SEE ATTACHED WORKSHEET)

Classwork/homework = odds