NAME: ANSWER KEY

* FOR REVISIONS: WHY IS YOUR ANSWER DIFFERENT THAN THE ONE IN THE ANSWER KEY? WHAT DO YOU NEED TO REMEMBER ABOUT THIS TYPE OF PROBLEM IN THE FUTURE?

PERFORMANCE TASK - LINEAR EQUATIONS (PART 1)

1. Is the following equation true if x = 5? SUBSTITUTE 5 IN FOR X

$6(x-2) = 18$

$6(5-2) = 18$

$6 \cdot 3 = 18$

$18 = 18$ ✓

TRUE

2. Is the following equation true if x = -2? SUBSTITUTE -2 IN FOR X

$3x - 7 + 5x = 9$

$3(-2) - 7 + 5(-2) = 9$

$-6 - 7 - 10 = 9$

$-13 - 10 = 9$

$-23 = 9$

X

FALSE

3. Is the following equation true if x = 7? SUBSTITUTE 7 IN FOR X

$\frac{4(x-4)}{3} + 8 = x + 5$

$\frac{4(7-4)}{3} + 8 = (7) + 5$

$\frac{4 \cdot 3}{3} + 8 = 12$

$\frac{12}{3} + 8 = 12$

$4 + 8 = 12$

$12 = 12$ ✓

TRUE

NAME: _____

Use the following table to help answer questions 4-5.

Addition Property of Equality	If A = B, then A + C = B + C
Subtraction Property of Equality	If A = B, then A - C = B - C
Multiplication Property of Equality	If A = B, then A · C = B · C
Division Property of Equality	If A = B, then $\frac{A}{C} = \frac{B}{C}$

4. (a) Solve for x: $18 - x = 2x + 6$

$+x \quad +x$

$18 = 3x + 6$

$-6 \quad -6$

$\frac{12}{3} = \frac{3x}{3}$

$4 = x$

* THERE ARE OTHER WAYS TO SOLVE THIS.

(b) What was the first property that you used to solve the equation?

ADDITION PROPERTY OF EQUALITY.

(COULD ALSO BE SUBTRACTION PROPERTY OF EQUALITY)

5. (a) Solve for x: $2 \cdot \frac{5x-6}{2} = 7 \cdot 2$

$5x - 6 = 14$

$+6 \quad +6$

$\frac{5x}{5} = \frac{20}{5}$

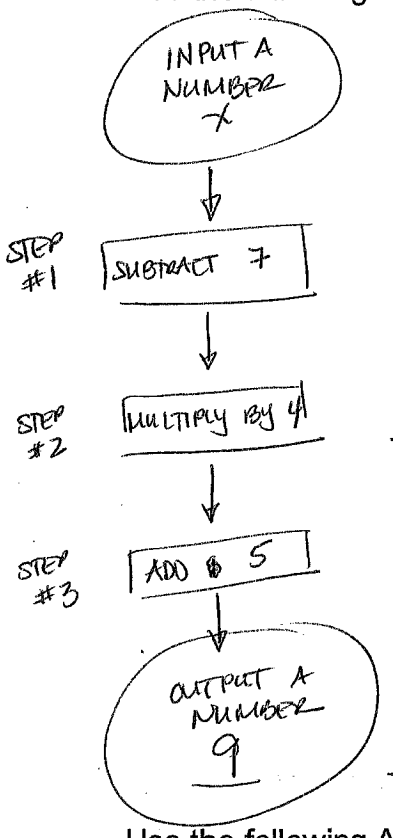
$x = 4$

(b) What was the first property that you used to solve the equation?

MULTIPLICATION PROPERTY OF EQUALITY

NAME: _____

Use the following Algebra Machine to solve x. Show your steps.



ALGEBRA

$x-7$

$4(x-7)$

$4(x-7)+5$

$4(x-7)+5=9$

Use this space to solve the equation:

$4(x-7)+5=9$

$-5 \quad -5$

reverse step #3

$\frac{4(x-7)}{4} = \frac{4}{4}$

reverse step #2

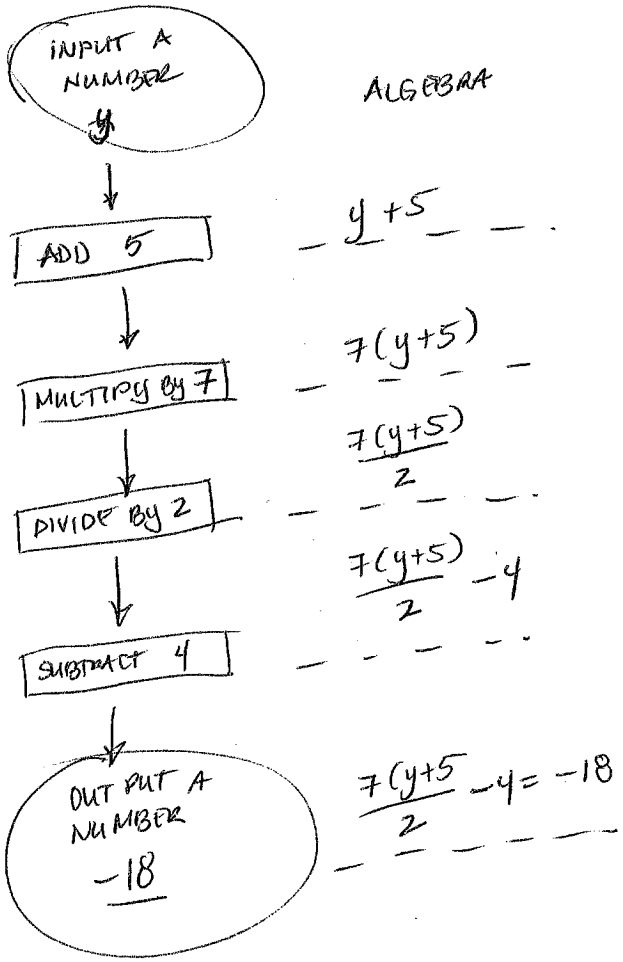
$x-7=1$

$+7 \quad +7$

reverse step #1

$x=8$

Use the following Algebra Machine to solve x. Show your steps.



ALGEBRA

$y+5$

$7(y+5)$

$\frac{7(y+5)}{2}$

$\frac{7(y+5)}{2}-4$

$\frac{7(y+5)}{2}-4=-18$

Use this space to solve the equation:

$\frac{7(y+5)}{2}-4=-18$

$+4 \quad +4$

reverse step #4

$\frac{7(y+5)}{2}=-14$ • 2

reverse step #3

$\frac{7(y+5)}{7} = \frac{-28}{7}$

reverse step #2

$y+5=-4$

$-5 \quad -5$

reverse step #1

$y=-9$