

NO Calculator

1 CAREFULLY SOLVE 8 SYSTEM OF EQUATIONS

$3x + x + x + x - 3 - 2 = 7 + x + x$

In the equation above, what is the value of x ?

- A) $-\frac{5}{7}$ **A. LABEL** $3x+x+x+x-3-2=7+x+x$
- B) 1 **B. CONTRACT** $6x-5=7+2x$
- C) $\frac{12}{7}$ **C. SOLVE CAREFULLY** $4x=12$
 $x=3$
- D) 3

1 LABEL & SOLVE 2

If $5x + 6 = 10$, what is the value of $10x + 3$?

- A) 4 **A. LABEL** $5x+6=10$ **B. SOLVE** $10x+3=$
- B) 9 $5x=4$ $\frac{10(\frac{4}{5})+3=$
- C) 11 $x=\frac{4}{5}$ $8+3=11$
- D) 20

1 LABEL & SOLVE 1

If $\frac{x-1}{3} = k$ and $k = 3$, what is the value of x ?

- A) 2 **A. PLUG IN ANSWERS** $\frac{x-1}{3} = k$ $\frac{10-1}{3} = k$
 - B) 4 **A. ELIMINATE FRACTION** $x-1 = 3k$ OR $\frac{9}{3} = 3$ ✓
 - C) 9 **B. SOLVE** $x-1 = 3(3)$
 - D) 10 $x-1=9$
 $x=10$
- WITH $k=3$

2 SUBSTITUTE & SOLVE 2

A. GET RID OF Y $(-2)x + y = 0$ (2)
 $3x - 2y = 10$

Which of the following ordered pairs (x, y) satisfies the system of equations above?

- A) $(3, -2)$ **B. DISTRIBUTE** $-2x - 2y = 0$
- B) $(2, -2)$ **C. SUBTRACT** $-3x - 2y = 10$
- C) $(-2, 2)$ $-5x = -10$
- D) $(-2, -2)$ $x = 2$ **D. P.O.E.**

3 PLUG IN & SOLVE 7

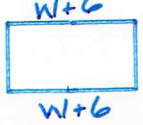
A. PLUG IN $x = y - 3$
 $\frac{x}{2} + 2y = 6$

Which ordered pair (x, y) satisfies the system of equations shown above?

- A) $(-3, 0)$ $\frac{y-3}{2} + 2y = 6$
- B) $(0, 3)$ $y-3+4y=12$ **B. MULT 2 BY BOTH SIDES**
- C) $(6, -3)$ $5y=15$ **C. SOLVE FOR Y**
- D) $(36, -6)$ $y=3$ **D. P.O.E.**

* SLICK LABEL & SOLVE 8

The width of a rectangular dance floor is w feet. The length of the floor is 6 feet longer than its width. Which of the following expresses the perimeter, in feet, of the dance floor in terms of w ?

- A) $2w + 6$
 - B) $4w + 12$ **A. LABEL**
 - C) $w^2 + 6$ **B. NOTICE SET-UP**
 - D) $w^2 + 6w$
- C. HOW IT LOOKS** → w  w
 $P = 4w + 12$
SIDE NOTE: $AREA = (L \times W) = w(w+6) = w^2 + 6w$

* SLICK PLUG IN & SOLVE 8

$y > 2x - 1$
 $2x > 5$ **A. LABEL AND CAREFULLY PLUG IN**

Which of the following consists of the y -coordinates of all the points that satisfy the system of inequalities above?

- A) $y > 6$ $y > 6 - 1$
- B) $y > 4$ $y > 5$ **B. P.O.E.**
- C) $y > \frac{5}{2}$ **IF OR** $y > 2x - 1$
- D) $y > \frac{3}{2}$ **AND** $2x > 5$ **SO** $2x - 1 > 5 - 1$
THEN $y > 2x - 1 > 4$ **AND** $y > 4$

9 SUBSTITUTE & SOLVE 1

A. REWRITE W/ LIKE VARIABLES $3x + 4y = -23$
 $2y - x = -19$

What is the solution (x, y) to the system of equations above?

- A) $(-5, -2)$ $3x + 4y = -23$
- B) $(3, -8)$ $(2) - x + 2y = -19$ **B. GET RID OF Y**
- C) $(4, -6)$ **THEN** $3x + 4y = -23$
- D) $(9, -6)$ $-2x + 4y = -38$ **C. SUBTRACT**
 $5x = 15$
 $x = 3$ **D. P.O.E.**

6 PLUG IN AND SOLVE 6

If $x = \frac{2}{3}y$ and $y = 18$, what is the value of $2x - 3$?

- A) 21 $\frac{2}{3} 18 = x$ **A. PLUG IN**
 - B) 15 $2x - 3 =$
 - C) 12 $2(12) - 3 =$
 - D) 10 $24 - 3 = 21$ **C. PLUG IN $x=12$**
- B. SOLVE FOR X**

NO Calculator
SYSTEM OF EQUATIONS
Student Response

16 LABEL & SOLVE 7

If $2x + 8 = 16$, what is the value of $x + 4$?

A. FACTOR OUT 2
 $2x + 8 = 16$
 B. DIVIDE BY 2
 $x + 4 = 8$

A. SOLVE FOR X
 $2x + 8 = 16$
 $2x = 8$
 $x = 4$
 B. SOLVE $x + 4$
 $x + 4 =$
 $4 + 4 = 8$

17 DISTRIBUTE & SOLVE 5

$2(p + 1) + 8(p - 1) = 5p$

What value of p is the solution of the equation above?

A. DISTRIBUTE
 $2p + 2 + 8p - 8 = 5p$
 B. CONTRACT
 $10p - 6 = 5p$
 $5p = 6$
 C. SOLVE
 $p = \frac{6}{5}$ OR 1.2

6	1	5
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 OR

1	.	2
---	---	---

 OR

1	.	2
---	---	---

17 SOLVE FOR T 6

$\frac{2}{3}t = \frac{5}{2}$

What value of t is the solution of the equation above?

A. MULT. RECIPROCAL BY BOTH SIDES
 $t = \frac{5}{2} \cdot \frac{3}{2}$

$t = \frac{15}{4}$ OR 3.75

1	5	4
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3	.	7	5
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18 PLUG IN & SOLVE 5

$\frac{1}{2}(2x + y) = \frac{21}{2}$
 $y = 2x$

A. PLUG IN!

The system of equations above has solution (x, y) .
 What is the value of x ?

CAREFULLY
 B. SOLVE FOR X
 $\frac{1}{2}(2x + 2x) = \frac{21}{2}$
 $\frac{1}{2}4x = \frac{21}{2}$
 $2x = 10.5$
 $x = 5.25$ OR $\frac{21}{4}$

18 SUBSTITUTE & SOLVE 1

(2) $x + y = -9$ (2) A. GET RID OF Y
 $x + 2y = -25$ B. MULT BY 2

According to the system of equations above, what is the value of x ?

C. SUBTRACT
 $2x + 2y = -18$
 $- x + 2y = -25$
 $x = 7$

18 SOLVE FOR Y 8

$-x + y = -3.5$
 $+ x + 3y = 9.5$

A. GET RID OF X
 B. ADD

If (x, y) satisfies the system of equations above, what is the value of y ?

$4y = 6$
 $y = \frac{6}{4}$ OR $\frac{3}{2}$ OR 1.5

20 MATH VOCAB 2

*SLICK

$ax + by = 12$
 $2x + 8y = 60$

In the system of equations above, a and b are

constants. If the system has infinitely many solutions, what is the value of $\frac{a}{b}$?

→ A. MEANS EQUATIONS ARE EQUAL TO EACH OTHER!!!

B. SO $a = 2$
 $b = 8$

$\frac{a}{b} = \frac{2}{8}$ OR $\frac{1}{4}$
 OR $.25$