Curriculum Outcomes:

PR1: . Generalize a pattern arising from a problem-solving context using linear equations and verify by substitution.

PR3. Model and solve problems using linear equations of the form:

$ax = b$; = b , a ≠ 0; $ax + b = c$; $+b = c$, a ≠ 0; = b, $x \neq 0$ ax ax xa

$ax + b = cx + d$; $a(bx + c) = d(ex + f)$; $a(x + b) = c$; ax = b+cx **concretely, pictorially and symbolically, where** ***a, b, c, d, e, and f*** **are rational numbers**

Student Friendly:

"Rearranging an equation with variables on both side of the equal sign"

Feb 6-7:53 AM

Warm Up

Use inverse operations to solve the following

(MUST SHOW WORK)

1) $7x - 8 + 3x - 4 = 6 + 2x$

$7x + 3x - 8 - 4 = 2x + 6$

$10x - 12 = 2x + 6$ (-2x, -2x)

$8x - 12 = 6$ (+12, +12)

$\frac{8x}{8} = \frac{18}{8}$

$x = \frac{9}{4}$

2) $6 - 5x + 3 - 2x = 4x - 5x - 7 + 8$

$-5x - 2x + 6 + 3 = -x + 1$

$-7x + 9 = -x + 1$ (+x, +x)

$-6x + 9 = 1$ (-9, -9)

$\frac{-6x}{-6} = \frac{-8}{-6}$

$x = \frac{4}{3}$

FIRST DISTRIBUTION™

Solve

$$5(x-4) = -3(x+2)$$

$$5x - 20 = -3x - 6 \quad (+3x)$$

$$8x - 20 = -6 \quad (+20)$$

$$\frac{8x}{8} = \frac{14}{8}$$

$$x = \frac{7}{4}$$

Solve

$4(y+8) = 7(y+2)$

y= 6

$4y + 32 = 7y + 14$

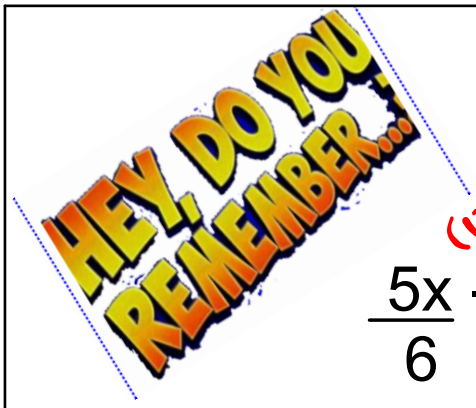
$-4y \quad -4y$

$32 = 3y + 14$

$-14 \quad -14$

$\frac{18}{3} = \frac{3y}{3}$

$y = 6$



$$\frac{5x}{6} - 2 = \frac{3}{4} - 3x \quad (\times 12)$$

$$\frac{60x}{6} - 24 = \frac{36}{4} - 36x$$

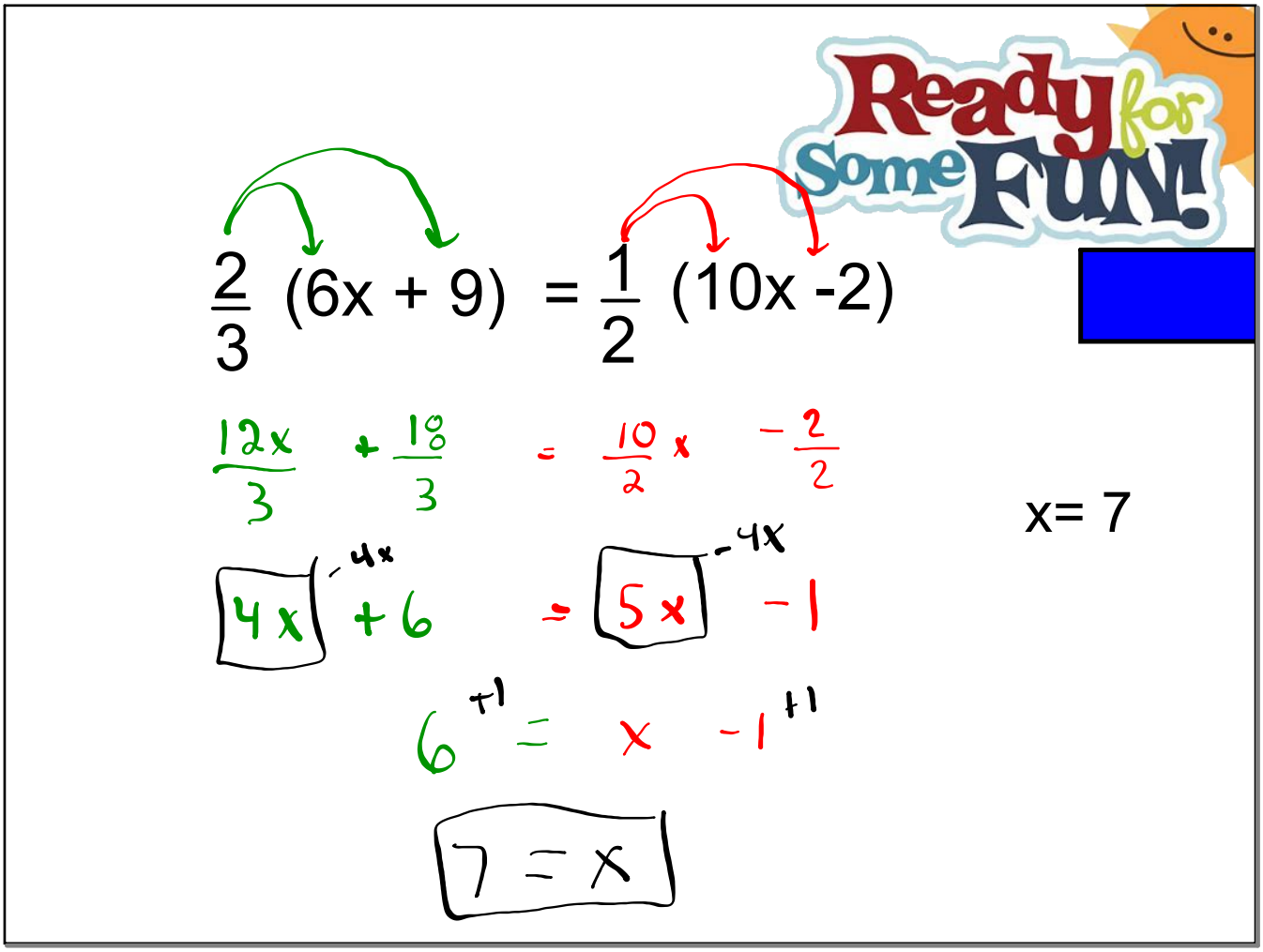
$$10x - 24 = 9 - 36x$$

$$10x - 24 = 9 - 36x \quad (+36x)$$

$$46x - 24 = 9 \quad (+24)$$

$$\frac{46x}{46} = \frac{33}{46}$$

$$x = \frac{33}{46}$$


Ready for Some FUN!
$\frac{2}{3}(6x + 9) = \frac{1}{2}(10x - 2)$
$\frac{12x}{3} + \frac{18}{3} = \frac{10x}{2} - \frac{2}{2}$
$4x + 6 = 5x - 1$
$6 = x - 1$
$7 = x$
x= 7

$$\frac{2}{3}(5x + 2) = \frac{1}{2}(7x - 3)$$

$$\frac{10x}{3}^{(6)} + \frac{4}{3}^{(6)} = \frac{7}{2}x^{(6)} - \frac{3}{2}^{(6)}$$

$$\boxed{20x}^{-20x} + 8 = \boxed{21x}^{-20x} - 9$$

$$8^{+9} = \boxed{x} - 9^{+9}$$

$$\boxed{x = 17}$$

You Try

$$\frac{1}{3}(9x + 3) = \frac{3}{2}(20x - 8)$$

$$\frac{9x}{3} + \frac{3}{3} = \frac{60x}{2} - \frac{24}{2}$$

$$3x + 1 = 30x - 12$$

$$3x \overset{-3x}{} + 1 = 30x \overset{-3x}{} - 12$$

$$1 = 27x - 12$$

$$1 \overset{+12}{} = 27x - 12 \overset{+12}{}$$

$$\frac{13}{27} = \frac{27x}{27}$$

$$\frac{13}{27} = x$$

You Try

$$\frac{-21}{5} \quad \frac{-16b}{5} = \frac{1b}{2} - \frac{1}{2}$$

(10) (10) (10) (10)

$-42 \quad -32b = 5b - 5$

+32b +32b

$-42 = 37b - 5$

+5 +5

$$\frac{-37}{37} = \frac{37b}{37}$$

$$b = -1$$

You Try

$$\frac{3v}{5} - \frac{10}{3} = \frac{1}{15} - \frac{6v}{5} + \frac{7v}{2}$$

(30) (30) (30) (30) (30)

$18v - 100 = 2 - 36v + 105v$

$-18v$ $-18v$

$18v - 100 = 2 + 69v$

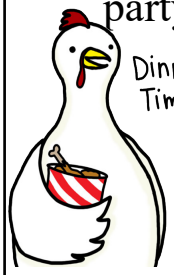
-2 -2

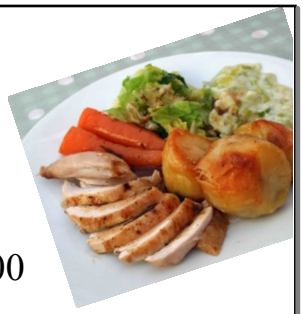
$-100 = 2 + 51v$

$$\frac{-102}{51} = \frac{51v}{51}$$

$$v = -2$$

Two restaurants charge different rates for catering a party.





$C = 30p + 300$

Company A: \$30 plate plus an addition flat fee of \$300

Company B: \$55 a plate $C = 55p$

When do the two companies charge the same amount???

Verify your work

$30p + 300 = 55p$ (-30p, -30p)

$\frac{300}{25} = \frac{25p}{25}$

$p = 12$

Verify

LHS

$30(12) + 300$

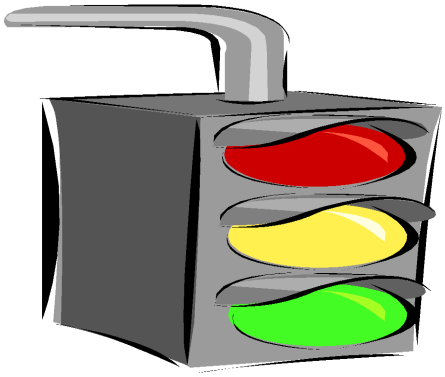
$360 + 300$

660

RHS

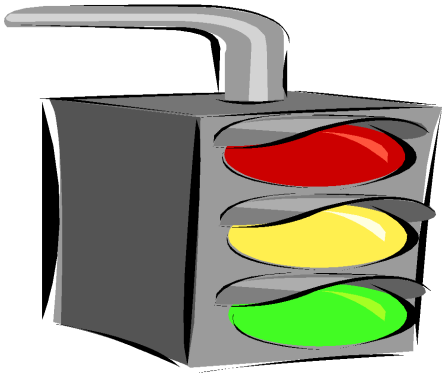
$55(12)$

660



Now it is time for Home Learning

Oct 27-10:41 PM



PAGE 281-283

QUESTIONS

12, 13, 15, 16 , 17, 19, 21

Oct 27-10:41 PM

Attachments

Solving Equations (6.1 Review) .pdf