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* ≠ 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"

Warm Up!

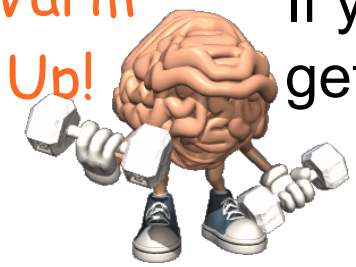
Solve for x using inverse operations

a) $\frac{2x}{3} - \frac{7}{2} = 3$

b) $-3(2x - 5) = -2$

c) $5x = 3x - 12$

Warm Up!



If you need to use the washroom or get a drink, go before class starts.

Solve for x using inverse operations

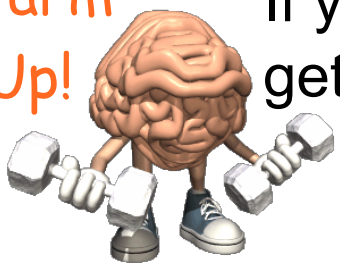
a) $\frac{2x}{3}^{(6)} - \frac{7}{2}^{(6)} = 3^{(6)}$

$4x - 21 = 18$ (+21 +21)

$\frac{4x}{4} = \frac{39}{4}$

$x = \frac{39}{4}$

Warm Up!



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Solve for x using inverse operations

b) $-3(2x - 5) = -2$

$-6x + 15 = -2$ (−15 −15)

$\frac{-6x}{-6} = \frac{-17}{-6}$

$x = \frac{17}{6}$

Warm Up!

If you need to use the washroom or get a drink, go before class starts.

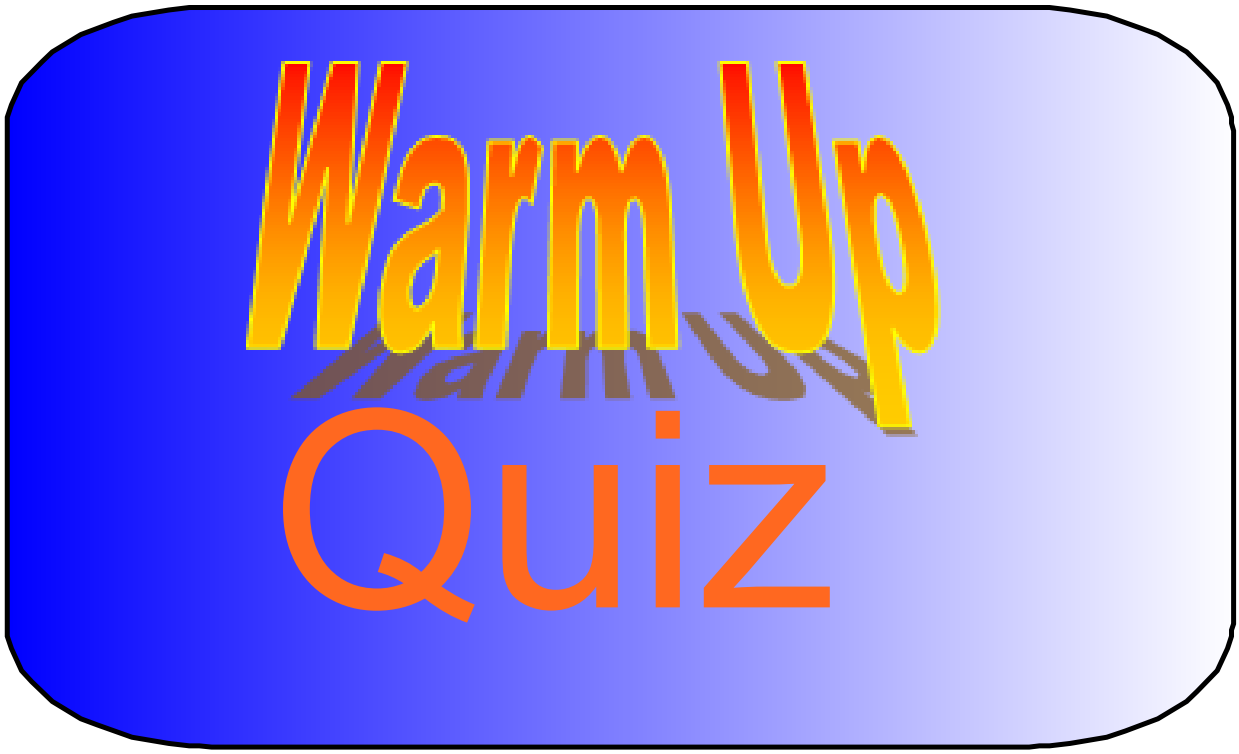
Solve for x using inverse operations

c) $5x = 3x - 12$

$-3x \quad -3x$

$\frac{2x}{2} = \frac{-12}{2}$

$x = -6$


Warm Up
Quiz

last night's homework

Page 281 - 283

6
8
#10

Any Questions?????

multiply by the lowes
common multiple

$$\frac{5a}{4} = \frac{a}{6} + 2 \qquad (12) \quad (12) \quad (12)$$

$$15a = 2a + 24 \qquad -2a \quad -2a$$

$$\frac{13a}{13} = \frac{24}{13}$$

$$a = \frac{24}{13}$$

$$\frac{5}{r} + 2 = 6$$

$$\frac{5}{r} = 4$$

$$5 = 4r$$

$$\frac{5}{4} = \frac{4r}{4}$$

$$r = \frac{5}{4}$$

$$\frac{5}{r} + \frac{2}{r} = \frac{6}{1}$$

$$5 + 2 = 6r$$

$$\frac{7}{6} = \frac{6r}{6}$$

$$r = \frac{7}{6}$$

$$\frac{28}{\sin 25} + \frac{13}{\sin 25} = 45(\sin 25)$$

$$28 + 13 = 45(\sin 25)$$

Two restaurants charge different rates for catering a party.

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

$Cost = 30n + 300$

Company B: **$55 a plate**

$Cost = 55n$

Verify your work

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

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

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

$12 = n$

LH

$30(12) + 300$

$360 + 300$

660

RH

$55(12)$

660

Solve

$9z - 1 - 7z = 7 - 6z - 15$

$2z - 1 = -8 - 6z$ (+6z)

$8z - 1 = -8$ (+1)

$\frac{8z}{8} = \frac{-7}{8}$

$z = -\frac{7}{8}$

Solve

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

$4y + 32 = 7y + 14$ (−4y, −4y)

$32 = 3y + 14$ (−14, −14)

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

$6 = y$

$$\frac{2}{3}(6x+9) = \frac{1}{2}(10x-2)$$

$$\frac{12x}{3} + \frac{18}{3} = \frac{10x}{2} - \frac{2}{2}$$

$$4x + 6 = 5x - 1$$

$-4x$ $-4x$

$$6 = x - 1$$

$+1$ $+1$

$$7 = x$$

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

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

$$\frac{60x}{3} + \frac{24}{3} = \frac{42x}{2} - \frac{18}{2}$$

$$20x + 8 = 21x - 9$$

$-20x$ $-20x$

$$8 = x - 9$$

$+9$ $+9$

$$17 = x$$

Class/Homework

Page 281 - 283

#11(b,d)
#16 (ai)
#17
19(abc)
#21(abc)

When you see fractions you must work with fractions