Aug 22

Bell ringer

Solve.

LCD 30

1) $\frac{2}{3}x - \frac{3}{2} - \frac{4}{5}x = \frac{2}{3}$

$20x - 45 - 24x = 20$

$-4x - 45 = 20$

$+45 \quad +45$

$\frac{-4x}{-4} = \frac{65}{-4}$

$x = -\frac{65}{4}$ or $-16\frac{1}{4}$

Learning target:
You can solve equations with variables on both sides and with grouping symbols.

① $8 + 5c = 7c - 2$

$-7c \quad -7c$

$8 - 2c = -2$

$-8 \quad -8$

$-2c = -10$

$\frac{-2c}{-2} = \frac{-10}{-2}$

$c = 5$

② $6(3a+1)-30=5(2a-4)$

$18a+6-30=10a-20$

$18a-24=10a-20$

$-10a \quad -10a$

$8a-24=-20$

$+24 \quad +24$

$\frac{8a}{8}=\frac{4}{8}$

$a=\frac{1}{2}$

$d = -\frac{1}{2}$

② $\frac{1}{3}(18+12q) = 6(2q-7)$

$6 + 4q = 12q - 42$

$-12q \quad -12q$

$6 - 8q = -42$

$-6 \quad -6$

$-8q = -48$

$-8 \quad -8$

$q = 6$

4) $8(5c-2) = 10(32+4c)$

$40c - 16 = 320 + 40c$

$-40c \qquad -40c$

$-16 = 320$

NO solution

5) $4(t+20) = \frac{1}{5}(20t+400)$

$4t+80 = 4t+80$

$-4t \qquad -4t$

$80 = 80$

infinitely many solutions

6) $5(x-2)=7x-10$

$5x-10=7x-10$

$-7x \quad -7x$

$-2x-10=-10$

$+10 \quad +10$

$\frac{-2x}{-2}=\frac{0}{-2}$

$x=0$

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(9)

$$3x+4+2x+5+5x+1 = 2(x+13)+2(2x)$$

$$10x+10 = 2x+26+4x$$

$$10x+10 = 6x+26$$

$$-6x \qquad -6x$$

$$4x+10 = 26$$

$$-10 \qquad -10$$

$$4x = 16$$

$x = 4$

(33)

$100(6.78j - 5.2 = 4.33j + 2.15)$

$678j - 520 = 433j + 215$

$-433j \qquad -433j$

$245j - 520 = 215$

$+520 \quad +520$

$245j = 735$

$j = 3$

B1

$$\frac{2m}{5} = \frac{1}{3}(2m - 12)$$

LCD 15

$$15 \cdot \frac{2m}{5} = 15 \cdot \frac{2}{3}m - 4 \cdot 15$$

$$6m = 10m - 60$$

$$-10m \quad -10m$$

$$\frac{-4m}{-4} = \frac{-60}{-4}$$

$m = 15$

Assignment

p. 100 (2-36 E
Omit #24)

$$12 - 3x = 5x$$
$$+3x \quad +3x$$

$$12 = 8x$$

$\frac{12}{8} \quad \frac{8}{8}$

$\frac{3}{2} = x$

or $12 - 3x = 5x$

$-5x \quad -5x$

$12 - 8x = 0$

$-12 \quad -12$

$-8x = -12$

$x = \frac{3}{2}$.

15)

$-10 = -14v + 14v$

$-10 = 0$

no solution

16)

$-2 = -(n - 8)$

$$-2 = -1(n-8)$$

$$-2 = -1n + 8$$

$\underline{-8}$ $\underline{-8}$

$$\frac{-10}{-1} = \frac{-1n}{-1}$$

$$10 = n$$

24)

$2.4p - 6 = 70.8$

$24p - 60 = 708$

$+60 \quad +60$

$24p = 768$

$p = 32$

14)

$-13 = 5(1+4m) - 2m$

$$-13 = 5 + 20m - 2m$$

$$-13 = 5 + 18m$$

$$-5 \quad -5$$

$$-18 = 18m$$

$$\frac{-18}{18} = \frac{18m}{18}$$

$$-1 = m$$