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UNIT 5: LINEAR EQUATIONS AND INEQUALITIES

SECTION 6.2: SOLVING EQUATIONS BY USING BALANCE STRATEGIES

M. MALTBY INGERSOLL
MATH 9

WHAT'S THE POINT OF TODAY'S LESSON?

We will continue working on the Math 9 Specific Curriculum Outcome (SCO) "Patterns and Relations 3" OR "PR3" which states:

"Model and solve problems using linear equations in a variety of forms ($ax = b$; $ax + b = c$; $ax + b = cx + d$; $a(bx + c) = d(ex + f)$ etc.) concretely, pictorially and symbolically where a, b, c, d, e and f are rational numbers."

What does THAT mean???

SCO PR3 means ALGEBRA!!!

WARM UP - SOLVE AND VERIFY THE FOLLOWING EQUATION: (DEGSAMDEB)

$$\frac{2}{3}(6x+15)=\frac{4}{5}(20x-10)$$

$$\frac{\cancel{15}^{5}}{1}\left(\frac{2}{\cancel{3}_{1}}\right)(6x+15) = \frac{\cancel{15}^{3}}{1}\left(\frac{4}{\cancel{5}_{1}}\right)(20x-10)$$

$$10(6x+15) = 12(20x-10)$$

$$60x+150 = 240x-120$$

$$150 = 180x-120$$

$$\frac{270}{180} = \frac{180x}{180}$$

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

WARM UP - SOLVE AND VERIFY THE FOLLOWING EQUATION: (DEGSAMDEB)

LS | RS

$$\frac{2}{3}(6x+15)=\frac{4}{5}(20x-10)$$

$\frac{2}{3}\left[\frac{6}{1}\left(\frac{3}{2}\right)+15\right]$ | $\frac{4}{5}\left[\frac{20}{1}\left(\frac{3}{2}\right)-10\right]$

$\frac{2}{3}(9+15)$ | $\frac{4}{5}(30-10)$

$\frac{2}{3}\left(\frac{24}{1}\right)$ | $\frac{4}{5}\left(\frac{20}{1}\right)$

16 | 16

$LS = RS \therefore x = \frac{3}{2}$.

HOMEWORK QUESTIONS???
(pages 281 / 282, #9, #15, #17 and #19)

cd ad

17.c) $\dfrac{2.2(h-5.3)}{0.2} = \dfrac{0.2(-32.9+h)}{0.2}$

$11(h-5.3) = -32.9+h$

$11h - 58.3 = -32.9+h$

$11h-h-58.3 = -32.9+h-h$

$10h-58.3 = -32.9$

$10h = 25.4$

$h = 2.54$

HOMEWORK QUESTIONS???
(pages 281 / 282, #9, #15, #17 and #19)

17.d) $0.04(5-s) = 0.05(6-s)$

$0.2 - 0.04s = 0.3 - 0.05s$

$0.2 - 0.04s + 0.05s = 0.3 - 0.05s + 0.05s$

$0.2 + 0.01s = 0.3$

$0.01s = 0.1$

$s = 10$

HOMEWORK QUESTIONS???
(pages 281 / 282, #9, #15, #17 and #19)

19. a) $\frac{7}{2}\left(\frac{m}{1}+\frac{12}{1}\right)=\frac{5}{2}\left(\frac{20}{1}+\frac{m}{1}\right)$

$\frac{7m}{2}+\frac{84}{2}=\frac{100}{2}+\frac{5m}{2}$

$2\left(\frac{7m}{2}\right)+2\left(\frac{84}{2}\right)=2\left(\frac{100}{2}\right)+2\left(\frac{5m}{2}\right)$

$7m+84=100+5m$

$7m-5m+84=100+5m-5m$

$2m+84=100$

$2m=16$

$m=8$

HOMEWORK QUESTIONS???
(pages 281 / 282, #9, #15, #17 and #19)

19. d) $\frac{2}{3}(6x+5) = \frac{4}{5}(20x-7)$

LCM = 15

$\frac{67}{90}$

$15\left(\frac{2}{3}\right)(6x+5) = 15\left(\frac{4}{5}\right)(20x-7)$

$60x+50 = 240x-84$

$60x-60x+50 = 240x-60x-84$

$50 = 180x-84$

GCF = 2 $\quad \frac{134}{180} = \frac{180x}{180}$

$\frac{67}{90} = x$

CONCEPT REINFORCEMENT:

***MMS9*:**
Page 286: #7 (Answers: page 515)

WORKSHEET: "Distribution"; #1 TO #24
(Please be sure to work on this sheet for 30 minutes at home tonight.)

HOMEWORK QUESTIONS???
(pages 281 / 282, #9, #15, #17 and #19)