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

Class/Homework

Worksheet 1:

Math 9B Name _____

6.1 & 6.2 Review

Date _____

Solve each equation.

1) $-5 = v - 2$ (+2, +2) v= -3

$-3 = v$

2) $-6 + x = 7$ (+6, +6) x= 13

$x = 13$

3) $18n = 270$ (÷18, ÷18) n=15

$n = 15$

4) $3 = 18 + n$ (−18, −18) n=-15

$-15 = n$

5) $3b = -\frac{27}{5}$ (×15, ×(5)) b= $\frac{-9}{5}$

$15b = -27$ (÷15, ÷15)

$b = \frac{-27}{15}$

$b = \frac{-9}{5}$

6) $-1 = \frac{n}{2}$ (×(2), ×(2)) n= -2

$-2 = n$

7) $\frac{1}{2} + n = \frac{5}{6}$ n= $\frac{1}{3}$

$3 + 6n = 5$

$\frac{6n}{6} = \frac{2}{6}$

$n = \frac{1}{3}$

8) $\frac{x}{5} + \frac{7}{15} = \frac{86}{15}$ n= $\frac{13}{3}$

$15x + 21 = 86$

$\frac{15x}{15} = \frac{65}{15}$

$x = \frac{13}{3}$

9) $3 = \frac{a}{8} + 5$ a= -16

$24 = a + 40$

$-16 = a$

10) $81 = 5n + 6$ n=15

$\frac{75}{5} = \frac{5n}{5}$

$15 = n$

13) $4n - 3 = 13 - 2n + 4n$ n= 8

$4n - 3 = 13 + 2n$

$2n - 3 = 13$

$\frac{2n}{2} = \frac{16}{2}$

$n = 8$

14) $1 + 2p = 7 + p$ p=6

$1 + p = 7$

$p = 6$

Class/Homework

Worksheet 2:

Math 9 Name_____

Section 6.2: Solving Equations

Date_____

Solve each equation.

1) $x - 6 + 7 = 3x - 11$ x= 6

$x + 1 = 3x - 11$

$1 = 2x - 11$

$12 = 2x$

$6 = x$

2) $6 + 5n + 2n = 11 + 6n$ n = 5

$6 + 7n = 11 + 6n$

$6 + n = 11$

$n = 5$

3) $-7n + 2 = -12 + 4n - 6 - 2$ n= 2

$-7n + 2 = -12 - 6 - 2 + 4n$

$-7n + 2 = -20 + 4n$

$2 = -20 + 11n$

$22 = 11n$

$2 = n$

4) $9 - 2n = n - 6$ n = 5

$9 = 3n - 6$

$15 = 3n$

$5 = n$

5) $-9 + x + 3 - 2 = 1 + 4x$

x = -3

$-9+3-2+x = 1+4x$

$-8+x = 1+4x$

$-8 = 1+3x$

$\frac{-9}{3} = \frac{3x}{3}$

$-3 = x$

6) $4v + 1 = 5v - 6 + 8v - 11$

v= 2

$4v+1 = 5v+8v-6-11$

$4v+1 = 13v-17$

$1 = 9v - 17$

$\frac{18}{9} = \frac{9v}{9}$

$2 = v$

7) $34 - 5x = 4(x - 5)$

x = 6

$34-5x = 4x-20$

$34 = 9x-20$

$\frac{54}{9} = \frac{9x}{9}$

$6 = x$

8) $6(1 - 3n) = -27 - 7n$

n = 3

$6-18n = -27-7n$

$6 = -27+11n$

$\frac{33}{11} = \frac{11n}{11}$

$3 = n$

9) $-5(p-1)=8-4p$ **p= -3**

$-5p+5=8-4p$ (+5p)

$5=8+p$ (−8)

$-3=p$

10) $-40+4x=-8(-4+4x)$ **x= 2**

$-40+4x=32-32x$ (+32x)

$-40+36x=32$ (+40)

$\frac{36x}{36}=\frac{72}{36}$

$x=2$

11) $-13-7r=-6(-5r-4)$ **r= -1**

$-13-7r=30r+24$ (+7r)

$-13=37r+24$ (−24)

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

$-1=r$

12) $-20-m=2(2+m)$ **m= -8**

$-20-m=4+2m$ (+m)

$-20=4+3m$ (−4)

$\frac{-24}{3}=\frac{3m}{3}$

$-8=m$

13) $-\frac{21}{5}-\frac{16}{5}b=\frac{1}{2}b-\frac{1}{2}$ (×10) **b= 1**

$-42-32b=5b-5$ (+32b)

$-42=37b-5$ (+5)

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

$-1=b$

14) $-\frac{49}{6}+\frac{9}{4}v=\frac{9}{4}v-\frac{7}{2}v$ (×12)

v= $\frac{7}{3}$

$-98+27v=27v-42v$

$-98+27v=-15v$ (+15v)

$-98+42v=0$ (+98)

$\frac{42v}{42}=\frac{98}{42}$

$v=\frac{7}{3}$

15) $\frac{3}{5}v - \frac{10}{3} = \frac{1}{15} - \frac{6}{5}v + \frac{7}{2}v$ ×(30) ×(30) ×(30) ×(30) ×(30)

v= -2

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

$18v - 100 = 2 + 69v - 18v$

$-100 = 2 + 51v$ (−2 −2)

$\frac{-100}{51} = \frac{51v}{51}$

$-2 = v$

16) $-x + x = 2x$

x= 0

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

$0 = x$

17) $2m - \frac{6}{5}m = -\frac{5}{3}m$ ×(15) ×(15) ×(15)

m= 0

$30m - 18m = -25m$

$12m = -25m$ (+25m)

$\frac{37m}{37} = 0$

$m = 0$

18) $\frac{25}{36} - \frac{23}{6}v = -5v + \frac{9}{4}$ ×(36) ×(36) ×(36) ×(36)

v= 4/3

$25 - 138v = -180v + 81$ (+180v)

$25 - 25 + 42v = 81 - 25$

$\frac{42v}{42} = \frac{56}{42}$

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