Curriculum Outcome

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

EXTENSION to unit: Solving equations with fraction in them

Student Friendly: "Rearranging an equation to get all the variables by themselves". Taking care of a fraction.

Class/Homework

Class work and homework

Mid-Unit Review

page 286
Questions: 3,4,5, 7, 8,

Worksheet questions

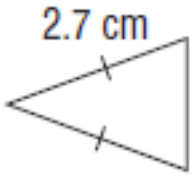
1, 5, 13, 17, 19, 21, 23, 25, 27

3. Sheila is charged a fare of $27.70 for a cab ride to her friend's house. The fare is calculated using a flat fee of $2.50, plus $1.20 per kilometre. What distance did Sheila travel?

a) Let k kilometres represent the distance travelled. Write an equation to solve the problem. Solve the problem.

b) Verify the solution.

4. An isosceles triangle has two equal sides of length 2.7 cm and perimeter 7.3 cm.



a) Write an equation that can be used to determine the length of the third side.

b) Solve the equation.

c) Verify the solution.

5. Solve each equation. Verify the solution.

a) $\frac{k}{3} = -1.5$

b) $10.5 = 3b - 12.5$

c) $5(x - 7.2) = 14.5$

d) $8.4 = 1.2b$

e) $2 + \frac{n}{3} = 2.8$

f) $-8 = 0.4(3.2 + h)$

7. Solve each equation. Verify the solution.

a) $\frac{56}{a} = -3.5, a \neq 0$

b) $8w - 12.8 = 6w$

c) $-8z + 11 = -10 - 5.5z$

d) $\frac{5x}{2} = 11 + \frac{2x}{3}$

e) $0.2(5 - 2r) = 0.3(1 - r)$

f) $12.9 + 2.3y = 4.5y + 19.5$

g) $\frac{2}{5}(m + 4) = \frac{1}{5}(3m + 9)$

8. Skateboards can be rented from two shops in a park.

Shop Y charges $15 plus $3 per hour
Shop Z charges $12 plus $4 per hour

Determine the time in hours for which the rental charges in both shops are equal.

a) Write an equation to determine the time.

b) Solve the equation.

c) Verify the solution.

Math 9

Name _____

Variables Both Sides

Per/Sec. _____ Date _____

Solve.

1) $4y - 10 = 3y$

2) $5 - 3w = 2w$

3) $4p + 2 = 11p$

4) $5x - 3 = -x$

5) $7r - 5 = 2r + 5$

6) $4a + 2 = 6a - 12$

7) $7m + 15 = 3m + 3$

8) $9r + 4 = 7r + 4$

9) $4x - 1 = 6x + 2$

10) $3a - 7 = a + 8$

11) $3z + 15 = 6z - 13$

12) $7w - 6 = 6w - 7$

13) $4f + 5 - 2f = 3f$

14) $6u + 7 - 3u = 8 + 5u - 11$

15) $5p + 2 - 3p = 8 + 4p - 6$

16) $9y - 1 - 7y = 7 - 6y - 15$

17) $9 + 6a - 14 = 8 - a - 6 + 4a$

18) $4(y + 8) = 7(y + 2)$

19) $4(2a - 2) = -2(1 - 5a)$

20) $6(4 - 3j) = -2(3j - 5)$

21) $3(g - 5) + 8g = 18 - (3 - 10g)$

22) $18 - (2a - 5) - 2(a + 2) = 3a + 5$

23) $\frac{1}{3}(6 - 15w) = \frac{3}{8}(40w - 8)$

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

25) $-\frac{5}{6}(30 + 18k) = \frac{2}{3}(45 - 15k)$

26) $10 - \frac{5}{8}h = \frac{3}{8}h - 6$

27) $\frac{3}{10}y = 19 - \frac{1}{5}y$

28) $4 - \frac{2}{3}m = \frac{1}{2}m$

29) $\frac{2(5p - 1)}{3} = 3p + 1$

30) $\frac{7(15 - 3c)}{8} = -5c + 6$

31) $12c + 2.6 = 6.8c$

32) $0.7d - 512 = 0.5d + 288$

33) $0.3n + 0.4 = 0.6n + 0.7 - 0.5n$

34) $0.4(4k - 0.9) = 0.1(k + 0.9)$

Attachments

Equations01.pdf

Equations03.pdf

Equations02.pdf