## Review

Chapter 2

## Lessons 2-1 to 2-4

Solve each equation.

$$\frac{1}{3}$$
 = 7

1. 
$$8p - 3 = 13$$
 $8p = 16$ 
 $p = 2$ 

4. 
$$6(t+5) = -36$$
  
6t +30 = -36  
-30 -30

7. 
$$7h + 2h - 3 = 15$$
  
9h -3 = 15  
+3 +3  
9h = 18

10. 
$$8g - 10g = 4$$

$$8\frac{11}{112}x = \frac{3}{14} \cdot \frac{1}{1}$$

$$x = \frac{3}{14} \cdot \frac{1}{1}$$

$$x = \frac{3}{14} \cdot \frac{1}{1}$$

$$\frac{1}{3}$$
 = 7

$$6.\frac{21}{12}(s+5) = 7.5 \frac{2}{2}$$

9. 
$$3r - 8 = -32$$
 $+9$ 
 $-9$ 
 $3c = -24$ 
 $(= -8)$ 

12. 
$$3(c-4) = -9$$

$$3c-12 = -9$$

Define a variable and write an equation for each situation. Then solve.

13. Your test scores for the semester are 87, 84, and 85. Can you raise your test average to 90 with your next test?

$$(4)\frac{81+84+85+\cancel{x}}{4}=90(4)$$

$$\frac{256 + x = 360}{-256} - \frac{256}{x = 104}$$

No, if the highest score is 100.

Maybe you can if there is exta credit.

**14.** You spend  $\frac{1}{2}$  of your allowance each week on school lunches. Each lunch costs \$1.25. How much is your weekly allowance?

Solve each equation. If the equation is an identity, write identity. If it has no solution, write no solution.

**15.** 
$$4h + 5 = 9h$$

16. 
$$2(3x-6) = 3(2x-4)$$
  
 $-6x-12=6x-12$   
 $-6x$   
 $-12=-12$  ID

17. 
$$7t = 80 + 9t$$

$$\frac{-9t}{-2t} = \frac{80}{-2} \quad (t = -40)$$

18. 
$$m + 3m = 4$$

19. 
$$-b + 4b = 8b - b$$

**20.** 
$$6p + 1 = 3(2p + 1)$$

**21.** 
$$10z - 5 + 3z = 8 - z$$

22. 
$$3(g-1)+7=3g+4$$

$$3g-3+7=3g+4$$

$$3g+4=3g+4$$

**23.** 
$$17 - 20q = (-13 - 5q)4$$

## Write an equation to model each situation. Then solve.

**24.** A DVD club charges a monthly membership fee of \$4.95 and \$11.95 for each DVD purchased. If a customer's bill for the month was \$64.70, how many DVDs did the customer purchase?

 $\chi = \#DVD's$  4.95 + 11.95 \times = 64.70  $-\frac{4.95}{11.95}$   $= \frac{-4.95}{59.75}$   $= \frac{5}{4}$  DVD'S

25. A lawyer charges \$100 per month to be put on retainer for a client. The lawyer also charges an hourly rate of \$75 for work done. How many hours does the lawyer have to work for a client, in one month, to charge \$625?

 $\chi = hours$   $\frac{100 + 75 \times = 625}{-100}$   $\chi = 7 hours$   $\chi = 7 hours$ 

**26.** A rectangular pool is twice as long as it is wide. What are the dimensions of the pool if the perimeter is 42 yd?

 $P = 2l + 2\omega$   $42 = 2(2\omega) + 2\omega$   $\omega = 74d$   $l = 2\omega$   $42 = 4\omega + 2\omega$  l = 14yd

27. Two friends rent an apartment together. They agree that one person will pay 1.5 times what the other person pays. If the rent is \$850, how much will each friend pay?

and pay? X + 1.5K = \$850  $\frac{2.5K}{2.5} = \frac{850}{2.5}$  X = \$340

28. A shopper's discount club charges a monthly fee of \$15 and sells gasoline for \$2.05 per gallon. The gas station across the street sells gasoline for \$2.35 per gallon and charges no fee. How many gallons of gasoline would you have to buy in one month to spend the same amount at either store?

 $\chi = \text{gallons}$  \$15 + \$2.05\times = \$2.35\times \frac{2.05\times - 2.05\times \frac{1}{2.05\times - 2.05\times \frac{1}{2.05\times

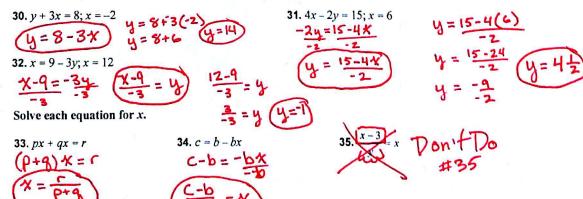
29. Michael and Kevin are running. Kevin gets a 3-mile head start and runs at a rate of 5.5 mi/h. Michael runs at a rate of 7 mi/h. How many hours will it take Michael to catch up with Kevin?

Michael to catch up with Kevin? 3 + 5.5 % = 7 %Lesson 2-5

Lesson 2-5

Lesson 2-5

Solve each equation for y. Then find the value of y for x.

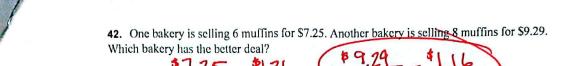


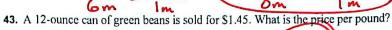
X= Cent of

1 = hours

otherperson

## 





43. A 12-ounce can of green beans is sold for \$1.45. What is the price per 
$$\frac{\$1.45}{12 \circ 2} = \frac{.12}{1 \circ 2} \times \frac{1602}{116} = \frac{\$1.93}{116}$$

44. A sailboat is traveling at a speed of 10 nautical miles per hour. If 1 nautical mile is 6076 ft, what is the speed of the sailboat in feet per second?

The Lord x The Lesson 2-7

Solve each proportion.

Solve each proportion.

45. 
$$\frac{3}{4} = \frac{-6}{m}$$

46.  $\frac{1}{7} = \frac{3}{21 \div 3}$ 

47.  $\frac{9}{j} = \frac{3}{16}$ 

48.  $\frac{2}{5} = \frac{w}{65}$ 

49.  $\frac{s}{15} = \frac{4}{45}$ 

50.  $\frac{9}{4} = \frac{x}{10}$ 

51.  $\frac{10}{q} = \frac{8}{62}$ 

52.  $\frac{3 \times 18}{2 \times 19}$ 

53.  $\frac{x - 3}{15} = \frac{2}{5}$ 

54.  $\frac{y + 8}{6} = \frac{y}{2}$ 

55.  $\frac{5 - a}{8} = \frac{4}{7}$ 

56.  $\frac{9}{b - 4} = \frac{12}{5}$ 

57.  $\frac{9}{12} = \frac{12}{5}$ 

58.  $\frac{9}{12} = \frac{12}{5}$ 

59.  $\frac{9}{12} = \frac{12}{5}$ 

69.  $\frac{9}{12} = \frac{12}{5}$ 

$$\frac{3pz}{12pl} = \frac{x}{68pl}$$
  $x = 17 pizzas$ 

families, about how many of them would you expect to own dogs?

Lesson 2-8 The figures in each pair are similar. Find the missing length.

inches between the cities on the map. 11/2 = X 15mi = 25mi

al airplane? 
$$\frac{40}{1} = \frac{x}{4.5} \qquad x = 180ft$$