Name _____ Class _____ Date _____

2-5 Practice

Form G

Literal Equations and Formulas

Solve each equation for *m*. Then find the value of *m* for each value of *n*.

1. $m + 3n = 7$; $n = -2, 0, 1$

2. $3m - 9n = 24$; $n = -1, 1, 3$

3. $-5n = 4m + 8$; $n = -1, 0, 1$

4. $2m = -6n - 5$; $n = 1, 2, 3$

5. $8n = -3m + 1$; $n = -2, 2, 4$

6. $4n - 6m = -2$; $n = -2, 0, 2$

7. $-5n = 13 - 3m$; $n = -3, 0, 3$

8. $10m + 6n = 12$; $n = -2, -1, 0$

Solve each equation for *x*.

9. $fx - gx = h$

10. $qx + x = r$

11. $m = \frac{x+n}{p}$

12. $d = f + fx$

13. $-3(x + n) = x$

14. $\frac{x-4}{y+2} = 5$

Solve each problem. Round to the nearest tenth, if necessary. Use 3.14 for pi.

15. What is the width of a rectangle with length 14 cm and area 161 cm^2?

16. What is the radius of a circle with circumference 13 ft?

17. A rectangle has perimeter 182 in. and length 52 in. What is the width?

18. A triangle has base 7 m and area 17.5 m^2. What is the height?

Name _____ Class _____ Date _____

2-5 Practice (continued) *Form G*

Literal Equations and Formulas

Solve each problem. Round to the nearest tenth, if necessary.

19. To find the average number of points per game a player scores, use the formula Points Per Game $= \frac{\text{Total Points}}{\text{Games}}$. Find the number of games a player has played if she has scored a total of 221 points and is averaging 17 points per game.

20. Joan drives 333.5 miles before she has to buy gas. Her car gets 29 miles per gallon. How many gallons of gas did the car start out with?

21. Stan is purchasing sub-flooring for a kitchen he is remodeling. The area of the floor is 180 ft^2 and the width of the kitchen is 12 ft. What is the length of the sub-floor?

Solve each equation for the given variable.

22. $4k + mn = n - 3; n$

23. $\frac{c}{d} + 2 = \frac{f}{g}; c$

24. $3ab - 2bc = 12; c$

25. $z = \left(\frac{x+y}{3}\right)w; y$

26. $-3(m - 2n) = 5m; m$

27. $A = \frac{1}{2}bcd + bc; d$

28. A room with width w, length l, and height h with four walls needs to be painted.

a. Write a formula for the area that needs to be painted not accounting for doors or windows.

b. Rewrite the formula to find h in terms of A, l, and w.

c. If l is 18 ft, w is 14 ft and A is 512 ft^2, what is the height of the room?

d. Reasoning Suppose l is equal to w. Write a formula for A in terms of w and h.