Name _____ Date _____ Class _____

LESSON 2-4

Practice A

Solving Equations Containing Integers

Name the operation you use to solve each equation. Do not solve.

1. $x + 8 = 12$ _____
2. $y - 2 = 8$ _____
3. $4x = 16$ _____
4. $\frac{x}{2} = -1$ _____
5. $3 + x = 7$ _____
6. $y - 1 = 1$ _____
7. $-x = 12$ _____
8. $\frac{x}{-4} = 5$ _____

Solve.

9. $x + 4 = 6$ _____
10. $y - 3 = 1$ _____
11. $4x = 12$ _____
12. $\frac{x}{2} = 3$ _____
13. $-4 + b = 3$ _____
14. $\frac{x}{2} = 4$ _____
15. $k + 1 = 9$ _____
16. $5x = 15$ _____
17. $r - 2 = 7$ _____
18. $\frac{m}{2} = 7$ _____
19. $6 + r = 11$ _____
20. $d - 1 = -2$ _____
21. $3x = -9$ _____
22. $\frac{a}{6} = -2$ _____
23. $\frac{w}{3} = -6$ _____
24. $-6x = -6$ _____

25. Josef saves the same amount each week for one year. At the end of that time, he has $624. How much did he save each week? (Hint: 1 year = 52 weeks.)

_____

26. Michelle earns $800 a week. How much will she earn in sixteen weeks?

_____

Copyright © by Holt, Rinehart and Winston.
All rights reserved.

Name _____ Date _____ Class _____

LESSON 2-4

Problem Solving

Solving Equations Containing Integers

Write the correct answer.

1. The 1954 elevation of Mt. Everest was 29,028 ft. In 1999, that elevation was revised to be 29,035 ft. Write an equation to find the change c in elevation of Mt. Everest.

_____

2. The difference between the boiling and melting points of fluorine is 32°C. If the boiling point of fluorine is −188°C, write an equation and solve to find the melting point m of fluorine.

_____

_____

3. The number one revenue-generating movie of 2000, *Dr. Seuss' How the Grinch Stole Christmas,* generated about twice the revenue of the number ten movie *Erin Brokovich.* If *The Grinch* generated about $253,000,000, estimate the revenue r generated by *Erin Brokovich.*

_____

4. The average January temperature in Fairbanks, Alaska, is −13°F. The April average is 43°F higher than the January average. Write an equation to find the average April temperature.

_____

_____

Choose the letter for the best answer.

5. It costs about twice as much per year to feed a hamster as it does to feed a bird. If it costs about $226 per year to feed a hamster, find the cost c per year to feed a bird.

   A $c = \$228$ **C** $c = \$224$

   B $c = \$113$ **D** $c = \$452$

6. One-third of Sandy's savings account is for her college education. If she has saved $2500 for her college education, how much total money m does she have in her savings account?

   F $m = \$7500$ **H** $m = \$833.33$

   G $m = \$2800$ **J** $m = \$850$

7. Naples, Florida, is the second fastest growing U.S. metropolitan area. From 1990 to 2000, the population increased by 99,278. If the 2000 population was 251,377, find the population p in 1990.

   A $p = 253{,}377$ **C** $p = 249{,}377$

   B $p = 350{,}655$ **D** $p = 152{,}099$

8. In 1940, the life expectancy for a female was 65 years. In 1999, the life expectancy for a female was 79 years. Find the increase s in the life expectancy for females.

   F $s = 14$ **H** $s = -14$

   G $s = 1.2$ **J** $s = 144$

Copyright © by Holt, Rinehart and Winston.
All rights reserved.

Name _____ Date _____ Class _____

LESSON 2-5

Practice A

Solving Inequalities Containing Integers

Tell whether you reverse the inequality symbol to solve each inequality.

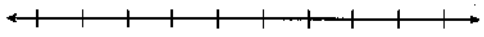
1. $-x + 5 > 8$ _____
2. $4 - x < 0$ _____
3. $2a \leq -10$ _____
4. $\frac{x}{-3} > 4$ _____

Solve.

5. $x + 1 > 3$ _____
6. $x - 4 < 1$ _____
7. $2a \leq 4$ _____
8. $\frac{x}{2} > 1$ _____
9. $-3x \leq 6$ _____
10. $t + 4 < -3$ _____
11. $\frac{x}{-3} \geq -1$ _____
12. $n - 2 > -2$ _____

Solve and graph.

13. $x + 4 > 1$



_____

14. $2x \leq -8$

_____

Write an inequality for each of the following.

15. A number increased by five is less than four.

_____

16. A number multiplied by two is greater than negative three.

_____

17. A number minus six is less than or equal to one.

_____

18. A number divided by five is greater than twelve.

_____

Copyright © by Holt, Rinehart and Winston.
All rights reserved.

Name _____ Date _____ Class _____

LESSON 2-5

Problem Solving

Solving Inequalities Containing Integers

Write the correct answer.

1. John has written too many checks and his bank balance was −$45. The bank has debited from his account an additional overdraft fee of $24. How much does he need to deposit so that his balance will be at least $50?

2. A brighter star has a lower magnitude. The difference between the magnitude of a full moon and the sun is less than 15. If the magnitude of the sun is −27, find the magnitude f of a full moon.

3. The cost of an ad is $1 for every 5 words. If Maria wants to spend no more than $15 on her ad, what is the maximum number of words w she can use?

4. A football team is penalized such that their overall yardage is affected by an average worse than −10 yd per penalty. If there were 5 penalties, what is the minimum net effect of the total yards the team was penalized?

Use the table below for Exercises 5–6.

5. Mt. Everest is less than four times higher than the highest point of elevation in Australia. Which inequality describes the height of Mt. Kosciusko?

   A $h < 2212.5$ m **C** $h > 2212.5$ m

   B $h < 35{,}400$ m **D** $h > 35{,}400$ m

6. The difference between the elevations of Mt. McKinley and Death Valley is more than 6000 m. Which inequality describes the height of Mt. McKinley?

   F $h > 6086$ m **H** $h < 6086$ m

   G $h > 5914$ m **J** $h < 5914$ m

7. A number decreased by −3 is less than nine. Which of these best represents this word phrase?

   A $x < 12$ **C** $x > 12$

   B $x < 6$ **D** $x > 6$

Extreme Elevations of Continents

Continent	Highest Point	Lowest Point
Asia	Mt. Everest 8850 m	Dead Sea −411 m
Africa	Mt. Kilimanjaro 5895 m	Lake Assal −156 m
North America	Mt. McKinley	Death Valley −86 m
South America	Mt. Aconcagua 6960 m	Valdes Peninsula −40 m
Antarctica	Vinson Massif 4897 m	Bentley Trench −2538 m
Europe	Mt. Elbrus 5642 m	Caspian Sea −28 m
Australia	Mt. Kosciusko	Lake Eyre −12 m

Copyright © by Holt, Rinehart and Winston.
All rights reserved.

Name _____ Date _____ Class _____

LESSON 2-6

Practice B

Exponents

Write using exponents.

1. $6 \cdot 6 \cdot 6 \cdot 6 \cdot 6 \cdot 6$

_____

2. $7 \cdot 7 \cdot 7 \cdot 7$

_____

3. $(-8) \cdot (-8) \cdot (-8) \cdot (-8)$

_____

Evaluate.

4. 10^2

_____

5. $(-6)^2$

_____

6. 8^2

_____

7. $(-7)^2$

_____

8. $(-5)^3$

_____

9. 12^2

_____

10. $(-9)^2$

_____

11. $(-4)^3$

_____

Simplify.

12. $5^3 - 10$

_____

13. $50 - 7^2$

_____

14. $(-9)^2 + 19$

_____

15. $6^2 - 2^4$

_____

16. $7^2 - 2^3 + 1$

_____

17. $10 + 3^3 \cdot 2$

_____

18. $8^2 + 4 \cdot 5^2$

_____

19. $2(5^3 + 10^2)$

_____

Evaluate for the given value of the variable.

20. n^3 for $n = 4$

_____

21. $4x^2$ for $x = 2$

_____

22. $y^4 - 10$ for $y = 3$

_____

23. Write an expression for five times a number that is used as a factor three times.

_____

24. Find the volume of a regular cube if the length of a side is 10 cm. (Hint: $V = l^3$.)

_____

Copyright © by Holt, Rinehart and Winston.
All rights reserved.