1.4-1.5 Practice B

Multiply.

1. $(-8)(-12)$

2. $-21 \bullet 4$

3. The water in a pool evaporates at a rate of 16 gallons per week. What integer represents the change in the number of gallons of water in the pool after 24 weeks?

Multiply.

4. $-15(-3)(-6)$

5. $13 \bullet 2 \bullet (-6)$

6. $-9(-9)(-9)$

Evaluate the expression.

7. -12^2

8. $-(-2)^3$

9. $(-11)^2 \bullet 7$

10. $11(-3) - (-2)(7)$

11. The gym offers a discount when more than one member of the family joins. The first member $(n = 0)$ pays \$550 per year. The second member to join $(n = 1)$ gets a discount of \$75 per year. The third member $(n = 2)$ gets an additional \$75 discount. The price for the nth member is given by $550 + (-75n)$.

   a. What is the price for the fourth member to join $(n = 3)$?

   b. For a large family, is it possible that a member would join for free? If so, which member would it be? Explain your reasoning.

   c. Other than \$0, what is the lowest amount that a member would pay to join? Which member would it be? Explain your reasoning.

12. Two integers, a and b, have a product of -48.

   a. What is the greatest possible sum of a and b?

   b. Is it possible for a and b to have a sum of 13? If so, what are the integers?

   c. What is the least possible difference of a and b?

Divide, if possible.

13. $\dfrac{-144}{-9}$ **14.** $-82 \div 0$ **15.** $-15 \div (-15)$ **16.** $225 \div (-25)$ **17.** $-48 \div (-3)$

18. Your team catches 42 Mahi Mahi over 2 weeks. What is the average daily Mahi Mahi catch?

Evaluate the expression.

19. $-10 + 16 \div (-2) + 7$ **20.** $10 - 12^2 \div (-2)^3$ **21.** $\dfrac{3 + 7 \cdot \left(-3^2\right)}{-5}$

22. PI-Squared and Euler Circles are in a math competition consisting of 10 two-part questions. Both parts correct earns 5 points, one part correct earns 2 points, and no parts correct earns -1 point.

a. What is the mean points per question for PI-Squared?

Team	Both	One	None
PI-Squared	4	2	4
Euler Circles	2	6	2

b. What is the mean points per question for Euler Circles?

c. Which team should win the competition? Explain your reasoning.

23. A 155-pound person burns about 500 calories per hour playing racquetball.

a. One pound is equal to 3500 calories. How long will it take to burn 1 pound playing racquetball?

b. How long will it take to burn 5 pounds playing racquetball? Explain your reasoning.

c. If the person were to rest 5 minutes for every 30 minutes of playing, how long would it take to burn 1 pound?