Name _____ Date _____

1.6

Homework

Show all of your work on a separate sheet of paper.

Essential Question Is the product of two integers *positive*, *negative*, or *zero*? How can you tell?

Multiply.

1. $(-8)(-12)$ **2.** $10 \cdot (-14)$ **3.** $-21 \cdot 4$ **4.** $-15 \cdot (-8)$

5. 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.

6. $5 \cdot (-11) \cdot (-4)$ **7.** $-15(-3)(-6)$ **8.** $-9 \cdot 0 \cdot (-3)$

9. $13 \cdot 2 \cdot (-6)$ **10.** $-16 \cdot 2 \cdot (-3)$ **11.** $-9(-9)(-9)$

Evaluate the expression.

12. $(-12)^2$ **13.** -12^2 **14.** $(-7)^3$

15. $-(-2)^3$ **16.** $(-2)^3 \cdot (-3)^2$ **17.** $(-11)^2 \cdot 7$

18. $-|-3| \cdot (-6)$ **19.** $11(-3) - (-2)(7)$ **20.** $-5 \cdot 8 - (-4)^3$

21. 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.