

Challenge Practice

For use with pages 41-46

Evaluate the expression.

1. $-4(-7)(2)(-3) \div (-8)$

2. $-5(4)(-3)(2)(-1) \div (-15)$

3. $\frac{-7(-9)(-12)}{3(-18)}$

4. $\frac{45(-3)(-4)}{-15(6)}$

5. $\frac{(-3)^7(-2)^6}{(-3)^6(-2)^5}$

6. $\frac{(-7)^{11}(13)^4}{(-7)^9(-13)^4}$

In Exercises 7-10, use the following information. A company makes a product that it sells for \$20 per unit. The materials to produce each unit of the product cost \$8. Each day the product is produced, there are fixed setup and cleanup costs totaling \$2000. So, the net profit P for producing x units per day is given by the equation $P = 20x + (-8x) - 2000$.

7. Find the net profit for producing 400 units of the product in one day.
8. Find the net profit for producing 200 units of the product each day for 4 consecutive days.
9. Find the net profit for producing 120 units of the product in one day. What does it mean to have a negative profit?
10. Find the net profit for producing 165 units of the product each day for 4 consecutive days.