

**Practice
5-2****Multiplying Rational Numbers**

1. Is the product $-8 \cdot (-3)$ positive or negative?
2. Is the product $(-0.39)(-0.06)(0.29)$ positive or negative?
3. Find the product $-\frac{5}{6} \cdot \frac{1}{8}$.
4. Multiply $-2\frac{1}{2} \cdot -1\frac{2}{3}$.
5. Multiply $(-0.6)(-0.62)$.
6. A farmer has 140 bushels of wheat to sell at his roadside stand. He sells an average of $15\frac{3}{5}$ bushels each day. Represent the total change in the number of bushels he has for sale after 6 days.
7. a) **Writing** What is the sign of a^2b when $a = 5$ and $b = 8$?

b) Does the sign of the product depend on the sign of a , the sign of b , or the signs of both a and b ? Explain.
8. **Reasoning** What is the sign of the product $(-2)\left(\frac{1}{6}\right)(-7)$? Explain your reasoning.

9. **Error Analysis** Kyle incorrectly says that the product $-(-\frac{6}{7}) \cdot (-\frac{1}{11})$ is $\frac{6}{77}$.

a) What is the correct product?

b) What was Kyle's likely error?

- A. He found the product of two negative numbers and ignored the first negative sign.
- B. He multiplied the numerator and denominator wrong.
- C. He multiplied the numerators wrong.
- D. He multiplied the denominators wrong.

10. **Temperature** Suppose there is a 1.1°F drop in temperature for every thousand feet that an airplane climbs into the sky. If the temperature on the ground is 59.7°F , what will be the temperature when the plane reaches an altitude of 11,000 ft?

11. a) **Estimation** Estimate the product $(14.93)(-12.66)$ by rounding each factor to the nearest integer and multiplying.

b) Find the exact product.

12. Multiply $-7\frac{1}{2} \cdot 2\frac{3}{4}$.

13. Multiply $(-2.271)(16.47)$.

14. **Think About the Process**

a) What is the first step in finding the product $-4\frac{7}{8} \cdot (-2\frac{1}{2})$?

- A. Multiply the integers.
- B. Find the sign of the product.
- C. Multiply the fractions.
- D. Change the sign of the second factor.

b) Find the product $-4\frac{7}{8} \cdot (-2\frac{1}{2})$.

8. a) **Reasoning** Find the reciprocal of $1\frac{1}{17}$.
 b) Find the reciprocal of $\frac{17}{18}$.
 c) Explain how finding the first reciprocal simplifies finding the second reciprocal.
9. a) **Error Analysis** Your friend says the quotient $\frac{3}{4} \div \frac{1}{4}$ is $\frac{1}{3}$. What is the correct quotient?
 b) What mistake did your friend likely make?
 A. Your friend multiplied with the reciprocal of the first fraction, not the second fraction.
 B. Your friend multiplied $\frac{4}{3} \times 4$.
 C. Your friend added the fractions instead of dividing.
 D. Your friend multiplied $\frac{3}{4} \times \frac{1}{4}$.
10. **Gardening** A certain plant grows $1\frac{2}{5}$ inches every week. How long will it take the plant to grow $4\frac{4}{5}$ inches?
 A. 3 weeks, 3 days
 B. 2 weeks, 3 days
 C. 3 weeks, 2 days
 D. 3 weeks, 3 days
11. **Open-Ended** Which multiplication expression is equivalent to $\frac{5}{8} \div \frac{1}{16}$?
 A. $\frac{8}{5} \times \frac{1}{16}$
 B. $\frac{5}{8} \times \frac{1}{16}$
 C. $\frac{5}{8} \times 16$
 D. $\frac{8}{5} \times 16$
12. Find the reciprocal of $-4\frac{7}{8}$.

13. Perform the indicated operation.

$$3\frac{1}{6} \div (-1\frac{4}{9})$$