

LESSON
1-5**Multiplying Rational Numbers****Practice and Problem Solving: C**

Compare the products by writing $<$ or $>$. Without doing the calculations, explain how you know your answers are correct.

1. $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} = \left(\frac{1}{2}\right)^3$ 1

2. $\left(-\frac{1}{2}\right) \times \left(-\frac{1}{2}\right) \times \left(-\frac{1}{2}\right) = \left(-\frac{1}{2}\right)^3$ 0

3. $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$ $\left(-\frac{1}{2}\right) \times \left(-\frac{1}{2}\right) \times \left(-\frac{1}{2}\right)$

4. $0.5(-1.1)$ 0

Tell whether each statement is *True* or *False*. Without doing the calculations, explain how you know your answers are correct.

5. $\left(-\frac{1}{2}\right)^6 < 0$ _____

6. $(1.5)^7 > 1$ _____

7. $(0.9)^4 > 1$ _____

Solve. (The formula for the volume of a sphere is $V = \frac{4}{3}\pi r^3$.)

8. The radius of a spherical balloon is $\frac{1}{2}$ foot. The radius of a second one is $\frac{3}{4}$ foot. How do the volumes of the balloons compare?

9. The radius of a sphere is reduced by one third. How does its volume change?
