

# Proficient

1. Classify  $\sqrt{25}$  as rational or irrational.

2. Classify  $\sqrt{11}$  as rational or irrational.

3. Classify  $-\sqrt{3}$  as rational or irrational.

4. Classify  $\frac{22}{7}$  as rational or irrational.

5. Classify  $0.333\dots$  as rational or irrational.

6. Classify  $1.414213\dots$  as rational or irrational.

7. Which is irrational:  $\sqrt{36}$  or  $\sqrt{6}$ ?

8. Which is rational:  $\pi$  or  $\frac{7}{5}$ ?

9.  $\sqrt{12}$  is between which two whole numbers?

10.  $\sqrt{20}$  is between which two whole numbers?

- 11.** As written, is 3.14159 rational or irrational?
- 12.** True or false: every terminating decimal is rational.
- 13.** True or false: every square root is irrational.
- 14.** Complete:  $\sqrt{49} = \square$ , so it is \_\_\_\_\_.
- 15.** Complete:  $\sqrt{15}$  lies between  $\square$  and  $\square$ .
- 16.** Which is greater:  $\sqrt{8}$  or 2.8?
- 17.** Which does not belong:  $\sqrt{2}$ ,  $\pi$ , 0.6,  $\sqrt{7}$ ?
- 18.** Why is  $\sqrt{10}$  irrational? Give one short reason.