

**Practice  
1-1****Expressing Rational Numbers with Decimal Expansions**

- Write  $\frac{6}{10}$  as a terminating decimal.
- Write  $\frac{69}{25}$  as a terminating decimal.
- Which decimal is equivalent to  $\frac{10}{11}$ ?  
 A.  $0.\overline{90}$   
 B.  $0.0\overline{90}$   
 C. 0.90  
 D. 0.90090
- Which decimal is equivalent to  $\frac{122}{11}$ ?  
 A.  $11.\overline{09}$   
 B. 11.09  
 C.  $11.\overline{1109}$   
 D. 11.1109
- Write  $\frac{1}{5}$  as a decimal.
  - Compare  $\frac{1}{5}$  and 0.201.
- Three friends want to drive to the park. Park A is 3.4 miles from Jamie's house. Park B is  $\frac{15}{8}$  miles from Jamie's house. Which park is closer to Jamie's house?
- Mental Math** 5 friends go out to lunch and order 4 pizzas. The friends divided the pizzas evenly. Find how much pizza each friend got as a decimal.
- Writing** Write  $\frac{700}{200}$  as a terminating decimal.
  - Describe two methods for converting a mixed number to a decimal.
- Reasoning** Write  $\frac{1,360}{220}$  as a repeating decimal.
  - Describe how you can tell that a fraction corresponds to a repeating decimal and not a terminating decimal.
  - How can you tell when the digits begin repeating?
- Error Analysis** Pedro compares  $\frac{7}{33}$  and  $\frac{2}{11}$ . He incorrectly says  $\frac{7}{33} < \frac{2}{11}$  because  $4.71 < 5.50$ . Compare  $\frac{7}{33}$  and  $\frac{2}{11}$ .
  - What is Pedro's likely error?  
 A. He divided the denominator by the numerator incorrectly.  
 B. He divided the numerator by the denominator incorrectly.  
 C. He divided the denominator by the numerator.  
 D. He divided the numerator by the denominator.

**Practice  
1-2**

**Exploring Irrational Numbers**

1. Find the square root  $\sqrt{9}$ .
2. Which numbers are irrational? Check all that apply.
 

<input type="checkbox"/> A. $\sqrt{42}$	<input type="checkbox"/> C. $\sqrt{64}$
<input type="checkbox"/> B. $\sqrt{100}$	<input type="checkbox"/> D. $\sqrt{21}$
3. Which numbers are rational? The dots, ..., indicate that the pattern continues.
 

I. 1.111111...	
II. 1.567	
III. 1.10110111...	

<input type="radio"/> A. II and III	<input type="radio"/> D. I and II
<input type="radio"/> B. III only	<input type="radio"/> E. I only
<input type="radio"/> C. II only	<input type="radio"/> F. None of the above.
4. Is 5.78778777... a rational or irrational number?
5. Find the sets of numbers to which  $-\frac{8}{9}$  belongs. Check all that apply.
 

<input type="checkbox"/> A. integers	<input type="checkbox"/> D. real numbers
<input type="checkbox"/> B. whole numbers	<input type="checkbox"/> E. rational numbers
<input type="checkbox"/> C. irrational numbers	<input type="checkbox"/> F. natural numbers
6. Which numbers are rational? Check all that apply.
 

<input type="checkbox"/> A. $\frac{8}{5}$	<input type="checkbox"/> F. $\frac{19}{3}$
<input type="checkbox"/> B. $\pi$	<input type="checkbox"/> G. -6
<input type="checkbox"/> C. 0	<input type="checkbox"/> H. There are no rational numbers
<input type="checkbox"/> D. $4.\overline{46}$	
<input type="checkbox"/> E. 10	
7. **Reasoning** The numbers 2.888... and 2.999... are both rational numbers. Which of the following is an irrational number that is between the two rational numbers? Check all that apply.
 

<input type="checkbox"/> A. 2.889	<input type="checkbox"/> C. 2.998999...
<input type="checkbox"/> B. 3.889888...	<input type="checkbox"/> D. 2.889888...
8. a) **Multiple Representations** Is the decimal form of  $\frac{13}{3}$  a rational number?  
 b) Explain how you can give the answer to this question without identifying the decimal form for the fraction.