



Determine if each problem when converted to a decimal will result in a repeating (R) or terminating (T) decimal.

Answers

A fraction will result in a **terminating** decimal if the prime factors of the simplified denominator contain only 2s or 5s (or only 2s and 5s).

$$\frac{6}{40} = \frac{3}{20} = 2 \times 2 \times 5 = 0.15$$

A fraction will result in a **repeating** decimal if the prime factors of the simplified denominator contain any prime factor other than 2 or 5.

$$\frac{5}{42} = 2 \times 3 \times 7 = 0.1\overline{190476}$$

1)  $\frac{22}{27} =$  \_\_\_\_\_

2)  $\frac{8}{28} =$  \_\_\_\_\_

3)  $\frac{10}{20} =$  \_\_\_\_\_

4)  $\frac{5}{16} =$  \_\_\_\_\_

5)  $62 \div 13 =$  \_\_\_\_\_

6)  $63 \div 6 =$  \_\_\_\_\_

7)  $71 \div 30 =$  \_\_\_\_\_

8)  $\frac{17}{29} =$  \_\_\_\_\_

9)  $\frac{1}{2} =$  \_\_\_\_\_

10)  $\frac{2}{3} =$  \_\_\_\_\_

11)  $78 \div 15 =$  \_\_\_\_\_

12)  $206 \div 21 =$  \_\_\_\_\_

13)  $101 \div 10 =$  \_\_\_\_\_

14)  $64 \div 7 =$  \_\_\_\_\_

15)  $\frac{12}{24} =$  \_\_\_\_\_

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_

13. \_\_\_\_\_

14. \_\_\_\_\_

15. \_\_\_\_\_



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A fraction will result in a **terminating** decimal if the prime factors of the simplified denominator contain only 2s or 5s (or only 2s and 5s).

$$\frac{6}{40} = \frac{3}{20} = 2 \times 2 \times 5 = 0.15$$

A fraction will result in a **repeating** decimal if the prime factors of the simplified denominator contain any prime factor other than 2 or 5.

$$\frac{5}{42} = 2 \times 3 \times 7 = 0.11\overline{90476}$$

Answers

1)  $\frac{22}{27} = \underline{3 \times 3 \times 3}$

2)  $\frac{8}{28} = \underline{7}$

3)  $\frac{10}{20} = \underline{2}$

4)  $\frac{5}{16} = \underline{2 \times 2 \times 2 \times 2}$

5)  $62 \div 13 = \underline{13}$

6)  $63 \div 6 = \underline{2}$

7)  $71 \div 30 = \underline{2 \times 3 \times 5}$

8)  $\frac{17}{29} = \underline{29}$

9)  $\frac{1}{2} = \underline{2}$

10)  $\frac{2}{3} = \underline{3}$

11)  $78 \div 15 = \underline{5}$

12)  $206 \div 21 = \underline{3 \times 7}$

13)  $101 \div 10 = \underline{2 \times 5}$

14)  $64 \div 7 = \underline{7}$

15)  $\frac{12}{24} = \underline{2}$

1. **R**

2. **R**

3. **T**

4. **T**

5. **R**

6. **T**

7. **R**

8. **R**

9. **T**

10. **R**

11. **T**

12. **R**

13. **T**

14. **R**

15. **T**