



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)  $31 \div 3 =$  \_\_\_\_\_

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

3)  $107 \div 28 =$  \_\_\_\_\_

4)  $\frac{4}{7} =$  \_\_\_\_\_

5)  $\frac{5}{13} =$  \_\_\_\_\_

6)  $\frac{7}{22} =$  \_\_\_\_\_

7)  $153 \div 25 =$  \_\_\_\_\_

8)  $271 \div 26 =$  \_\_\_\_\_

9)  $99 \div 24 =$  \_\_\_\_\_

10)  $\frac{7}{12} =$  \_\_\_\_\_

11)  $\frac{1}{4} =$  \_\_\_\_\_

12)  $166 \div 27 =$  \_\_\_\_\_

13)  $\frac{7}{8} =$  \_\_\_\_\_

14)  $\frac{7}{15} =$  \_\_\_\_\_

15)  $\frac{16}{23} =$  \_\_\_\_\_

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)  $31 \div 3 =$  3

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

3)  $107 \div 28 =$   $2 \times 2 \times 7$

4)  $\frac{4}{7} =$  7

5)  $\frac{5}{13} =$  13

6)  $\frac{7}{22} =$   $2 \times 11$

7)  $153 \div 25 =$   $5 \times 5$

8)  $271 \div 26 =$   $2 \times 13$

9)  $99 \div 24 =$   $2 \times 2 \times 2$

10)  $\frac{7}{12} =$   $2 \times 2 \times 3$

11)  $\frac{1}{4} =$   $2 \times 2$

12)  $166 \div 27 =$   $3 \times 3 \times 3$

13)  $\frac{7}{8} =$   $2 \times 2 \times 2$

14)  $\frac{7}{15} =$   $3 \times 5$

15)  $\frac{16}{23} =$  23

1. R

2. T

3. R

4. R

5. R

6. R

7. T

8. R

9. T

10. R

11. T

12. R

13. T

14. R

15. R