



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)  $137 \div 29 =$  \_\_\_\_\_

2)  $\frac{2}{4} =$  \_\_\_\_\_

3)  $44 \div 5 =$  \_\_\_\_\_

4)  $\frac{2}{15} =$  \_\_\_\_\_

5)  $\frac{4}{8} =$  \_\_\_\_\_

6)  $10 \div 3 =$  \_\_\_\_\_

7)  $\frac{1}{6} =$  \_\_\_\_\_

8)  $\frac{7}{11} =$  \_\_\_\_\_

9)  $\frac{6}{20} =$  \_\_\_\_\_

10)  $\frac{2}{17} =$  \_\_\_\_\_

11)  $123 \div 24 =$  \_\_\_\_\_

12)  $179 \div 23 =$  \_\_\_\_\_

13)  $\frac{12}{14} =$  \_\_\_\_\_

14)  $200 \div 19 =$  \_\_\_\_\_

15)  $\frac{6}{9} =$  \_\_\_\_\_

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)  $137 \div 29 =$  29

2)  $\frac{2}{4} =$  2

3)  $44 \div 5 =$  5

4)  $\frac{2}{15} =$  3x5

5)  $\frac{4}{8} =$  2

6)  $10 \div 3 =$  3

7)  $\frac{1}{6} =$  2x3

8)  $\frac{7}{11} =$  11

9)  $\frac{6}{20} =$  2x5

10)  $\frac{2}{17} =$  17

11)  $123 \div 24 =$  2x2x2

12)  $179 \div 23 =$  23

13)  $\frac{12}{14} =$  7

14)  $200 \div 19 =$  19

15)  $\frac{6}{9} =$  3

1. R

2. T

3. T

4. R

5. T

6. R

7. R

8. R

9. T

10. R

11. T

12. R

13. R

14. R

15. R