



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)  $156 \div 16 =$  \_\_\_\_\_

2)  $\frac{20}{29} =$  \_\_\_\_\_

3)  $68 \div 25 =$  \_\_\_\_\_

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

5)  $202 \div 20 =$  \_\_\_\_\_

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

7)  $\frac{4}{23} =$  \_\_\_\_\_

8)  $\frac{8}{9} =$  \_\_\_\_\_

9)  $186 \div 24 =$  \_\_\_\_\_

10)  $\frac{2}{6} =$  \_\_\_\_\_

11)  $127 \div 26 =$  \_\_\_\_\_

12)  $\frac{7}{21} =$  \_\_\_\_\_

13)  $36 \div 17 =$  \_\_\_\_\_

14)  $\frac{3}{4} =$  \_\_\_\_\_

15)  $7 \div 2 =$  \_\_\_\_\_

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.

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

1)  $156 \div 16 =$  2x2

2)  $\frac{20}{29} =$  29

3)  $68 \div 25 =$  5x5

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

5)  $202 \div 20 =$  2x5

6)  $\frac{2}{3} =$  3

7)  $\frac{4}{23} =$  23

8)  $\frac{8}{9} =$  3x3

9)  $186 \div 24 =$  2x2

10)  $\frac{2}{6} =$  3

11)  $127 \div 26 =$  2x13

12)  $\frac{7}{21} =$  3

13)  $36 \div 17 =$  17

14)  $\frac{3}{4} =$  2x2

15)  $7 \div 2 =$  2

Answers

1. T

2. R

3. T

4. R

5. T

6. R

7. R

8. R

9. T

10. R

11. R

12. R

13. R

14. T

15. T