



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

2)  $\frac{1}{8} =$  \_\_\_\_\_

3)  $\frac{16}{20} =$  \_\_\_\_\_

4)  $102 \div 19 =$  \_\_\_\_\_

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

6)  $288 \div 27 =$  \_\_\_\_\_

7)  $\frac{11}{13} =$  \_\_\_\_\_

8)  $\frac{6}{16} =$  \_\_\_\_\_

9)  $196 \div 30 =$  \_\_\_\_\_

10)  $\frac{21}{24} =$  \_\_\_\_\_

11)  $101 \div 15 =$  \_\_\_\_\_

12)  $243 \div 26 =$  \_\_\_\_\_

13)  $45 \div 18 =$  \_\_\_\_\_

14)  $84 \div 22 =$  \_\_\_\_\_

15)  $144 \div 14 =$  \_\_\_\_\_

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 **repeating** decimal if the prime factors of the simplified denominator contain any prime factor other than 2 or 5.

$$\frac{5}{42} = 2 \times 3 \times 7 = 0.1190476$$

Answers

1)  $10 \div 3 =$  3

2)  $\frac{1}{8} =$   $2 \times 2 \times 2$

3)  $\frac{16}{20} =$  5

4)  $102 \div 19 =$  19

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

6)  $288 \div 27 =$  3

7)  $\frac{11}{13} =$  13

8)  $\frac{6}{16} =$   $2 \times 2 \times 2$

9)  $196 \div 30 =$   $3 \times 5$

10)  $\frac{21}{24} =$   $2 \times 2 \times 2$

11)  $101 \div 15 =$   $3 \times 5$

12)  $243 \div 26 =$   $2 \times 13$

13)  $45 \div 18 =$  2

14)  $84 \div 22 =$  11

15)  $144 \div 14 =$  7

1. R

2. T

3. T

4. R

5. R

6. R

7. R

8. T

9. R

10. T

11. R

12. R

13. T

14. R

15. R