



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)  $195 \div 30 =$  \_\_\_\_\_

2)  $161 \div 18 =$  \_\_\_\_\_

3)  $49 \div 24 =$  \_\_\_\_\_

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

5)  $46 \div 22 =$  \_\_\_\_\_

6)  $114 \div 11 =$  \_\_\_\_\_

7)  $230 \div 28 =$  \_\_\_\_\_

8)  $\frac{1}{3} =$  \_\_\_\_\_

9)  $\frac{14}{21} =$  \_\_\_\_\_

10)  $168 \div 17 =$  \_\_\_\_\_

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

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

13)  $\frac{11}{25} =$  \_\_\_\_\_

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

15)  $73 \div 12 =$  \_\_\_\_\_

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)  $195 \div 30 =$  2

2)  $161 \div 18 =$   $2 \times 3 \times 3$

3)  $49 \div 24 =$   $2 \times 2 \times 2 \times 3$

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

5)  $46 \div 22 =$  11

6)  $114 \div 11 =$  11

7)  $230 \div 28 =$   $2 \times 7$

8)  $\frac{1}{3} =$  3

9)  $\frac{14}{21} =$  3

10)  $168 \div 17 =$  17

11)  $\frac{3}{4} =$   $2 \times 2$

12)  $\frac{6}{10} =$  5

13)  $\frac{11}{25} =$   $5 \times 5$

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

15)  $73 \div 12 =$   $2 \times 2 \times 3$

Answers

1. T

2. R

3. R

4. T

5. R

6. R

7. R

8. R

9. R

10. R

11. T

12. T

13. T

14. R

15. R