



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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$$\frac{6}{40} = \frac{3}{20} = 2 \times 2 \times 5 = 0.15$$

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)  $195 \div 30 = \underline{2}$

2)  $161 \div 18 = \underline{2 \times 3 \times 3}$

3)  $49 \div 24 = \underline{2 \times 2 \times 2 \times 3}$

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

5)  $46 \div 22 = \underline{11}$

6)  $114 \div 11 = \underline{11}$

7)  $230 \div 28 = \underline{2 \times 7}$

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

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

10)  $168 \div 17 = \underline{17}$

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

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

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

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

15)  $73 \div 12 = \underline{2 \times 2 \times 3}$

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