



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)  $\frac{2}{5} =$  \_\_\_\_\_
- 2)  $47 \div 9 =$  \_\_\_\_\_
- 3)  $141 \div 16 =$  \_\_\_\_\_
- 4)  $108 \div 11 =$  \_\_\_\_\_
- 5)  $\frac{9}{17} =$  \_\_\_\_\_
- 6)  $\frac{12}{28} =$  \_\_\_\_\_
- 7)  $\frac{8}{20} =$  \_\_\_\_\_
- 8)  $\frac{2}{26} =$  \_\_\_\_\_
- 9)  $7 \div 2 =$  \_\_\_\_\_
- 10)  $151 \div 30 =$  \_\_\_\_\_
- 11)  $\frac{10}{12} =$  \_\_\_\_\_
- 12)  $\frac{12}{13} =$  \_\_\_\_\_
- 13)  $\frac{4}{14} =$  \_\_\_\_\_
- 14)  $92 \div 21 =$  \_\_\_\_\_
- 15)  $10 \div 4 =$  \_\_\_\_\_

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.

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

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

2)  $47 \div 9 =$  3x3

3)  $141 \div 16 =$  2x2x2x2

4)  $108 \div 11 =$  11

5)  $\frac{9}{17} =$  17

6)  $\frac{12}{28} =$  7

7)  $\frac{8}{20} =$  5

8)  $\frac{2}{26} =$  13

9)  $7 \div 2 =$  2

10)  $151 \div 30 =$  2x3x5

11)  $\frac{10}{12} =$  2x3

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

13)  $\frac{4}{14} =$  7

14)  $92 \div 21 =$  3x7

15)  $10 \div 4 =$  2

Answers

1. T

2. R

3. T

4. R

5. R

6. R

7. T

8. R

9. T

10. R

11. R

12. R

13. R

14. R

15. T