



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)  $\frac{18}{27} =$  \_\_\_\_\_
- 2)  $\frac{3}{8} =$  \_\_\_\_\_
- 3)  $196 \div 24 =$  \_\_\_\_\_
- 4)  $\frac{10}{28} =$  \_\_\_\_\_
- 5)  $71 \div 22 =$  \_\_\_\_\_
- 6)  $82 \div 14 =$  \_\_\_\_\_
- 7)  $60 \div 21 =$  \_\_\_\_\_
- 8)  $\frac{3}{5} =$  \_\_\_\_\_
- 9)  $15 \div 4 =$  \_\_\_\_\_
- 10)  $\frac{1}{2} =$  \_\_\_\_\_
- 11)  $33 \div 7 =$  \_\_\_\_\_
- 12)  $\frac{4}{6} =$  \_\_\_\_\_
- 13)  $\frac{14}{30} =$  \_\_\_\_\_
- 14)  $\frac{2}{17} =$  \_\_\_\_\_
- 15)  $80 \div 9 =$  \_\_\_\_\_

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)  $\frac{18}{27} = \underline{3}$
- 2)  $\frac{3}{8} = \underline{2 \times 2 \times 2}$
- 3)  $196 \div 24 = \underline{2 \times 3}$
- 4)  $\frac{10}{28} = \underline{2 \times 7}$
- 5)  $71 \div 22 = \underline{2 \times 11}$
- 6)  $82 \div 14 = \underline{7}$
- 7)  $60 \div 21 = \underline{7}$
- 8)  $\frac{3}{5} = \underline{5}$
- 9)  $15 \div 4 = \underline{2 \times 2}$
- 10)  $\frac{1}{2} = \underline{2}$
- 11)  $33 \div 7 = \underline{7}$
- 12)  $\frac{4}{6} = \underline{3}$
- 13)  $\frac{14}{30} = \underline{3 \times 5}$
- 14)  $\frac{2}{17} = \underline{17}$
- 15)  $80 \div 9 = \underline{3 \times 3}$

Answers

1. R
2. T
3. R
4. R
5. R
6. R
7. R
8. T
9. T
10. T
11. R
12. R
13. R
14. R
15. R