



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. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_
11. \_\_\_\_\_
12. \_\_\_\_\_
13. \_\_\_\_\_
14. \_\_\_\_\_
15. \_\_\_\_\_

- 1)  $\frac{5}{23} =$  \_\_\_\_\_
- 2)  $\frac{21}{25} =$  \_\_\_\_\_
- 3)  $\frac{7}{13} =$  \_\_\_\_\_
- 4)  $73 \div 30 =$  \_\_\_\_\_
- 5)  $61 \div 7 =$  \_\_\_\_\_
- 6)  $\frac{10}{24} =$  \_\_\_\_\_
- 7)  $180 \div 19 =$  \_\_\_\_\_
- 8)  $\frac{3}{4} =$  \_\_\_\_\_
- 9)  $\frac{8}{9} =$  \_\_\_\_\_
- 10)  $107 \div 15 =$  \_\_\_\_\_
- 11)  $40 \div 6 =$  \_\_\_\_\_
- 12)  $\frac{16}{29} =$  \_\_\_\_\_
- 13)  $217 \div 28 =$  \_\_\_\_\_
- 14)  $133 \div 16 =$  \_\_\_\_\_
- 15)  $\frac{7}{8} =$  \_\_\_\_\_



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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)  $\frac{5}{23} =$  23
- 2)  $\frac{21}{25} =$  5×5
- 3)  $\frac{7}{13} =$  13
- 4)  $73 \div 30 =$  2×3×5
- 5)  $61 \div 7 =$  7
- 6)  $\frac{10}{24} =$  2×2×3
- 7)  $180 \div 19 =$  19
- 8)  $\frac{3}{4} =$  2×2
- 9)  $\frac{8}{9} =$  3×3
- 10)  $107 \div 15 =$  3×5
- 11)  $40 \div 6 =$  3
- 12)  $\frac{16}{29} =$  29
- 13)  $217 \div 28 =$  2×2
- 14)  $133 \div 16 =$  2×2×2×2
- 15)  $\frac{7}{8} =$  2×2×2

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