



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)  $\frac{5}{23} =$  \_\_\_\_\_

2)  $\frac{21}{25} =$  \_\_\_\_\_

3)  $\frac{7}{13} =$  \_\_\_\_\_

4)  $73 \div 30 =$  \_\_\_\_\_

5)  $61 \div 7 =$  \_\_\_\_\_

6)  $\frac{10}{24} =$  \_\_\_\_\_

7)  $77 \div 8 =$  \_\_\_\_\_

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

9)  $\frac{8}{9} =$  \_\_\_\_\_

10)  $107 \div 15 =$  \_\_\_\_\_

11)  $40 \div 6 =$  \_\_\_\_\_

12)  $\frac{16}{29} =$  \_\_\_\_\_

13)  $139 \div 22 =$  \_\_\_\_\_

14)  $86 \div 26 =$  \_\_\_\_\_

15)  $\frac{13}{21} =$  \_\_\_\_\_

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)  $\frac{5}{23} =$  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)  $77 \div 8 =$  2×2×2
- 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)  $139 \div 22 =$  2×11
- 14)  $86 \div 26 =$  13
- 15)  $\frac{13}{21} =$  3×7

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