



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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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