



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.

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

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

2) $\frac{21}{25} =$ 5x5

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

4) $73 \div 30 =$ 2x3x5

5) $61 \div 7 =$ 7

6) $\frac{10}{24} =$ 2x2x3

7) $77 \div 8 =$ 2x2x2

8) $\frac{3}{4} =$ 2x2

9) $\frac{8}{9} =$ 3x3

10) $107 \div 15 =$ 3x5

11) $40 \div 6 =$ 3

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

13) $139 \div 22 =$ 2x11

14) $86 \div 26 =$ 13

15) $\frac{13}{21} =$ 3x7

Answers

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