



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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$$\frac{5}{42} = 2 \times 3 \times 7 = 0.1\overline{190476}$$

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