



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)  $\frac{6}{16} =$  \_\_\_\_\_
- 2)  $\frac{6}{18} =$  \_\_\_\_\_
- 3)  $25 \div 6 =$  \_\_\_\_\_
- 4)  $\frac{7}{23} =$  \_\_\_\_\_
- 5)  $39 \div 4 =$  \_\_\_\_\_
- 6)  $\frac{4}{9} =$  \_\_\_\_\_
- 7)  $112 \div 29 =$  \_\_\_\_\_
- 8)  $130 \div 17 =$  \_\_\_\_\_
- 9)  $71 \div 7 =$  \_\_\_\_\_
- 10)  $\frac{3}{11} =$  \_\_\_\_\_
- 11)  $114 \div 25 =$  \_\_\_\_\_
- 12)  $\frac{13}{19} =$  \_\_\_\_\_
- 13)  $27 \div 5 =$  \_\_\_\_\_
- 14)  $13 \div 3 =$  \_\_\_\_\_
- 15)  $19 \div 2 =$  \_\_\_\_\_

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 **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.

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

- 1)  $\frac{6}{16} = \underline{2 \times 2 \times 2}$
- 2)  $\frac{6}{18} = \underline{3}$
- 3)  $25 \div 6 = \underline{2 \times 3}$
- 4)  $\frac{7}{23} = \underline{23}$
- 5)  $39 \div 4 = \underline{2 \times 2}$
- 6)  $\frac{4}{9} = \underline{3 \times 3}$
- 7)  $112 \div 29 = \underline{29}$
- 8)  $130 \div 17 = \underline{17}$
- 9)  $71 \div 7 = \underline{7}$
- 10)  $\frac{3}{11} = \underline{11}$
- 11)  $114 \div 25 = \underline{5 \times 5}$
- 12)  $\frac{13}{19} = \underline{19}$
- 13)  $27 \div 5 = \underline{5}$
- 14)  $13 \div 3 = \underline{3}$
- 15)  $19 \div 2 = \underline{2}$

Answers

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