



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) $31 \div 3 =$ _____

2) $\frac{1}{2} =$ _____

3) $107 \div 28 =$ _____

4) $\frac{4}{7} =$ _____

5) $\frac{5}{13} =$ _____

6) $\frac{7}{22} =$ _____

7) $153 \div 25 =$ _____

8) $271 \div 26 =$ _____

9) $99 \div 24 =$ _____

10) $\frac{7}{12} =$ _____

11) $\frac{1}{4} =$ _____

12) $166 \div 27 =$ _____

13) $\frac{7}{8} =$ _____

14) $\frac{7}{15} =$ _____

15) $\frac{16}{23} =$ _____

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.

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

Answers

1) $31 \div 3 = \underline{3}$

2) $\frac{1}{2} = \underline{2}$

3) $107 \div 28 = \underline{2 \times 2 \times 7}$

4) $\frac{4}{7} = \underline{7}$

5) $\frac{5}{13} = \underline{13}$

6) $\frac{7}{22} = \underline{2 \times 11}$

7) $153 \div 25 = \underline{5 \times 5}$

8) $271 \div 26 = \underline{2 \times 13}$

9) $99 \div 24 = \underline{2 \times 2 \times 2}$

10) $\frac{7}{12} = \underline{2 \times 2 \times 3}$

11) $\frac{1}{4} = \underline{2 \times 2}$

12) $166 \div 27 = \underline{3 \times 3 \times 3}$

13) $\frac{7}{8} = \underline{2 \times 2 \times 2}$

14) $\frac{7}{15} = \underline{3 \times 5}$

15) $\frac{16}{23} = \underline{23}$

1. R

2. T

3. R

4. R

5. R

6. R

7. T

8. R

9. T

10. R

11. T

12. R

13. T

14. R

15. R