



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) $\frac{2}{12} =$ _____
- 2) $\frac{11}{15} =$ _____
- 3) $53 \div 11 =$ _____
- 4) $\frac{19}{23} =$ _____
- 5) $\frac{21}{28} =$ _____
- 6) $95 \div 26 =$ _____
- 7) $144 \div 20 =$ _____
- 8) $\frac{5}{7} =$ _____
- 9) $93 \div 25 =$ _____
- 10) $14 \div 4 =$ _____
- 11) $109 \div 18 =$ _____
- 12) $\frac{7}{9} =$ _____
- 13) $172 \div 17 =$ _____
- 14) $\frac{8}{14} =$ _____
- 15) $\frac{4}{6} =$ _____

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

2) $\frac{11}{15} = \underline{3 \times 5}$

3) $53 \div 11 = \underline{11}$

4) $\frac{19}{23} = \underline{23}$

5) $\frac{21}{28} = \underline{2 \times 2}$

6) $95 \div 26 = \underline{2 \times 13}$

7) $144 \div 20 = \underline{5}$

8) $\frac{5}{7} = \underline{7}$

9) $93 \div 25 = \underline{5 \times 5}$

10) $14 \div 4 = \underline{2}$

11) $109 \div 18 = \underline{2 \times 3 \times 3}$

12) $\frac{7}{9} = \underline{3 \times 3}$

13) $172 \div 17 = \underline{17}$

14) $\frac{8}{14} = \underline{7}$

15) $\frac{4}{6} = \underline{3}$

Answers

1. R

2. R

3. R

4. R

5. T

6. R

7. T

8. R

9. T

10. T

11. R

12. R

13. R

14. R

15. R