



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) $\frac{18}{27} =$ _____
- 2) $\frac{3}{8} =$ _____
- 3) $196 \div 24 =$ _____
- 4) $\frac{10}{28} =$ _____
- 5) $71 \div 22 =$ _____
- 6) $82 \div 14 =$ _____
- 7) $60 \div 21 =$ _____
- 8) $\frac{3}{5} =$ _____
- 9) $15 \div 4 =$ _____
- 10) $\frac{1}{2} =$ _____
- 11) $33 \div 7 =$ _____
- 12) $\frac{4}{6} =$ _____
- 13) $\frac{14}{30} =$ _____
- 14) $\frac{2}{17} =$ _____
- 15) $80 \div 9 =$ _____

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) $\frac{18}{27} = \underline{3}$

2) $\frac{3}{8} = \underline{2 \times 2 \times 2}$

3) $196 \div 24 = \underline{2 \times 3}$

4) $\frac{10}{28} = \underline{2 \times 7}$

5) $71 \div 22 = \underline{2 \times 11}$

6) $82 \div 14 = \underline{7}$

7) $60 \div 21 = \underline{7}$

8) $\frac{3}{5} = \underline{5}$

9) $15 \div 4 = \underline{2 \times 2}$

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

11) $33 \div 7 = \underline{7}$

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

13) $\frac{14}{30} = \underline{3 \times 5}$

14) $\frac{2}{17} = \underline{17}$

15) $80 \div 9 = \underline{3 \times 3}$

Answers

1. R

2. T

3. R

4. R

5. R

6. R

7. R

8. T

9. T

10. T

11. R

12. R

13. R

14. R

15. R