



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.

$$\frac{5}{42} = 2 \times 3 \times 7 = 0.\overline{1190476}$$

1) $78 \div 12 =$ _____

2) $\frac{12}{25} =$ _____

3) $61 \div 9 =$ _____

4) $\frac{1}{28} =$ _____

5) $17 \div 3 =$ _____

6) $60 \div 18 =$ _____

7) $42 \div 10 =$ _____

8) $\frac{3}{20} =$ _____

9) $\frac{3}{30} =$ _____

10) $\frac{6}{29} =$ _____

11) $13 \div 2 =$ _____

12) $\frac{5}{22} =$ _____

13) $\frac{2}{7} =$ _____

14) $\frac{12}{13} =$ _____

15) $60 \div 24 =$ _____

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 **repeating** decimal if the prime factors of the simplified denominator contain any prime factor other than 2 or 5.

$$\frac{5}{42} = 2 \times 3 \times 7 = 0.1190476$$

1) $78 \div 12 = \underline{2}$

2) $\frac{12}{25} = \underline{5 \times 5}$

3) $61 \div 9 = \underline{3 \times 3}$

4) $\frac{1}{28} = \underline{2 \times 2 \times 7}$

5) $17 \div 3 = \underline{3}$

6) $60 \div 18 = \underline{3}$

7) $42 \div 10 = \underline{5}$

8) $\frac{3}{20} = \underline{2 \times 2 \times 5}$

9) $\frac{3}{30} = \underline{2 \times 5}$

10) $\frac{6}{29} = \underline{29}$

11) $13 \div 2 = \underline{2}$

12) $\frac{5}{22} = \underline{2 \times 11}$

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

14) $\frac{12}{13} = \underline{13}$

15) $60 \div 24 = \underline{2}$

Answers

1. T

2. T

3. R

4. R

5. R

6. R

7. T

8. T

9. T

10. R

11. T

12. R

13. R

14. R

15. T