



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) $\frac{2}{5} =$ _____

2) $47 \div 9 =$ _____

3) $141 \div 16 =$ _____

4) $108 \div 11 =$ _____

5) $\frac{9}{17} =$ _____

6) $\frac{12}{28} =$ _____

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

8) $\frac{2}{26} =$ _____

9) $7 \div 2 =$ _____

10) $151 \div 30 =$ _____

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

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

13) $\frac{4}{14} =$ _____

14) $92 \div 21 =$ _____

15) $10 \div 4 =$ _____

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.

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

1) $\frac{2}{5} =$ 5

2) $47 \div 9 =$ 3x3

3) $141 \div 16 =$ 2x2x2x2

4) $108 \div 11 =$ 11

5) $\frac{9}{17} =$ 17

6) $\frac{12}{28} =$ 7

7) $\frac{8}{20} =$ 5

8) $\frac{2}{26} =$ 13

9) $7 \div 2 =$ 2

10) $151 \div 30 =$ 2x3x5

11) $\frac{10}{12} =$ 2x3

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

13) $\frac{4}{14} =$ 7

14) $92 \div 21 =$ 3x7

15) $10 \div 4 =$ 2

Answers

1. T

2. R

3. T

4. R

5. R

6. R

7. T

8. R

9. T

10. R

11. R

12. R

13. R

14. R

15. T