



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) $195 \div 30 =$ _____

2) $161 \div 18 =$ _____

3) $49 \div 24 =$ _____

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

5) $46 \div 22 =$ _____

6) $114 \div 11 =$ _____

7) $230 \div 28 =$ _____

8) $\frac{1}{3} =$ _____

9) $\frac{14}{21} =$ _____

10) $168 \div 17 =$ _____

11) $\frac{3}{4} =$ _____

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

13) $\frac{11}{25} =$ _____

14) $\frac{6}{9} =$ _____

15) $73 \div 12 =$ _____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____



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$$\frac{6}{40} = \frac{3}{20} = 2 \times 2 \times 5 = 0.15$$

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) $195 \div 30 =$ 2

2) $161 \div 18 =$ $2 \times 3 \times 3$

3) $49 \div 24 =$ $2 \times 2 \times 2 \times 3$

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

5) $46 \div 22 =$ 11

6) $114 \div 11 =$ 11

7) $230 \div 28 =$ 2×7

8) $\frac{1}{3} =$ 3

9) $\frac{14}{21} =$ 3

10) $168 \div 17 =$ 17

11) $\frac{3}{4} =$ 2×2

12) $\frac{6}{10} =$ 5

13) $\frac{11}{25} =$ 5×5

14) $\frac{6}{9} =$ 3

15) $73 \div 12 =$ $2 \times 2 \times 3$

Answers

1. T

2. R

3. R

4. T

5. R

6. R

7. R

8. R

9. R

10. R

11. T

12. T

13. T

14. R

15. R