



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) $\frac{5}{6} =$ _____

2) $\frac{5}{23} =$ _____

3) $150 \div 27 =$ _____

4) $149 \div 24 =$ _____

5) $78 \div 20 =$ _____

6) $21 \div 4 =$ _____

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

8) $\frac{7}{19} =$ _____

9) $111 \div 12 =$ _____

10) $264 \div 25 =$ _____

11) $\frac{11}{17} =$ _____

12) $85 \div 15 =$ _____

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

14) $\frac{1}{10} =$ _____

15) $25 \div 11 =$ _____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____



Determine if each problem when converted to a decimal will result in a repeating (R) or terminating (T) decimal.

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) $\frac{5}{6} = \underline{2 \times 3}$

2) $\frac{5}{23} = \underline{23}$

3) $150 \div 27 = \underline{3 \times 3}$

4) $149 \div 24 = \underline{2 \times 2 \times 2 \times 3}$

5) $78 \div 20 = \underline{2 \times 5}$

6) $21 \div 4 = \underline{2 \times 2}$

7) $\frac{4}{28} = \underline{7}$

8) $\frac{7}{19} = \underline{19}$

9) $111 \div 12 = \underline{2 \times 2}$

10) $264 \div 25 = \underline{5 \times 5}$

11) $\frac{11}{17} = \underline{17}$

12) $85 \div 15 = \underline{3}$

13) $\frac{7}{14} = \underline{2}$

14) $\frac{1}{10} = \underline{2 \times 5}$

15) $25 \div 11 = \underline{11}$

Answers

1. R

2. R

3. R

4. R

5. T

6. T

7. R

8. R

9. T

10. T

11. R

12. R

13. T

14. T

15. R