



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) $136 \div 19 =$ _____

2) $\frac{7}{26} =$ _____

3) $8 \div 3 =$ _____

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

5) $79 \div 13 =$ _____

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

7) $48 \div 21 =$ _____

8) $\frac{24}{27} =$ _____

9) $\frac{8}{29} =$ _____

10) $\frac{5}{30} =$ _____

11) $172 \div 28 =$ _____

12) $\frac{4}{10} =$ _____

13) $36 \div 11 =$ _____

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

15) $\frac{8}{16} =$ _____

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) $136 \div 19 =$ 19

2) $\frac{7}{26} =$ 2×13

3) $8 \div 3 =$ 3

4) $\frac{5}{23} =$ 23

5) $79 \div 13 =$ 13

6) $\frac{6}{12} =$ 2

7) $48 \div 21 =$ 7

8) $\frac{24}{27} =$ 3×3

9) $\frac{8}{29} =$ 29

10) $\frac{5}{30} =$ 2×3

11) $172 \div 28 =$ 7

12) $\frac{4}{10} =$ 5

13) $36 \div 11 =$ 11

14) $\frac{2}{8} =$ 2×2

15) $\frac{8}{16} =$ 2

Answers

1. R

2. R

3. R

4. R

5. R

6. T

7. R

8. R

9. R

10. R

11. R

12. T

13. R

14. T

15. T