



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) $\frac{7}{30} =$ _____
- 2) $\frac{12}{13} =$ _____
- 3) $182 \div 25 =$ _____
- 4) $\frac{4}{12} =$ _____
- 5) $\frac{24}{29} =$ _____
- 6) $201 \div 22 =$ _____
- 7) $82 \div 8 =$ _____
- 8) $\frac{2}{3} =$ _____
- 9) $51 \div 21 =$ _____
- 10) $\frac{6}{16} =$ _____
- 11) $255 \div 26 =$ _____
- 12) $\frac{1}{5} =$ _____
- 13) $\frac{3}{4} =$ _____
- 14) $148 \div 15 =$ _____
- 15) $\frac{18}{28} =$ _____

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 **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) $\frac{7}{30} =$ 2×3×5

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

3) $182 \div 25 =$ 5×5

4) $\frac{4}{12} =$ 3

5) $\frac{24}{29} =$ 29

6) $201 \div 22 =$ 2×11

7) $82 \div 8 =$ 2×2

8) $\frac{2}{3} =$ 3

9) $51 \div 21 =$ 7

10) $\frac{6}{16} =$ 2×2×2

11) $255 \div 26 =$ 2×13

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

13) $\frac{3}{4} =$ 2×2

14) $148 \div 15 =$ 3×5

15) $\frac{18}{28} =$ 2×7

Answers

1. R

2. R

3. T

4. R

5. R

6. R

7. T

8. R

9. R

10. T

11. R

12. T

13. T

14. R

15. R