



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.

$$\frac{5}{42} = 2 \times 3 \times 7 = 0.1190476$$

- 1) $\frac{9}{10} =$ _____
- 2) $\frac{12}{13} =$ _____
- 3) $\frac{28}{29} =$ _____
- 4) $17 \div 2 =$ _____
- 5) $\frac{2}{6} =$ _____
- 6) $\frac{3}{4} =$ _____
- 7) $71 \div 14 =$ _____
- 8) $70 \div 15 =$ _____
- 9) $\frac{1}{5} =$ _____
- 10) $52 \div 17 =$ _____
- 11) $75 \div 7 =$ _____
- 12) $95 \div 18 =$ _____
- 13) $173 \div 25 =$ _____
- 14) $\frac{1}{21} =$ _____
- 15) $\frac{8}{9} =$ _____

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____



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$$\frac{5}{42} = 2 \times 3 \times 7 = 0.1190476$$

- 1) $\frac{9}{10} =$ 2×5
- 2) $\frac{12}{13} =$ 13
- 3) $\frac{28}{29} =$ 29
- 4) $17 \div 2 =$ 2
- 5) $\frac{2}{6} =$ 3
- 6) $\frac{3}{4} =$ 2×2
- 7) $71 \div 14 =$ 2×7
- 8) $70 \div 15 =$ 3
- 9) $\frac{1}{5} =$ 5
- 10) $52 \div 17 =$ 17
- 11) $75 \div 7 =$ 7
- 12) $95 \div 18 =$ 2×3×3
- 13) $173 \div 25 =$ 5×5
- 14) $\frac{1}{21} =$ 3×7
- 15) $\frac{8}{9} =$ 3×3

Answers

1. T
2. R
3. R
4. T
5. R
6. T
7. R
8. R
9. T
10. R
11. R
12. R
13. T
14. R
15. R