



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.

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

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____

1) $\frac{5}{8} =$ _____

2) $\frac{18}{30} =$ _____

3) $309 \div 29 =$ _____

4) $31 \div 6 =$ _____

5) $220 \div 24 =$ _____

6) $128 \div 13 =$ _____

7) $\frac{5}{21} =$ _____

8) $\frac{14}{20} =$ _____

9) $\frac{4}{9} =$ _____

10) $\frac{9}{28} =$ _____

11) $\frac{14}{15} =$ _____

12) $65 \div 7 =$ _____

13) $35 \div 16 =$ _____

14) $275 \div 26 =$ _____

15) $82 \div 18 =$ _____



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

- 1) $\frac{5}{8} =$ $2 \times 2 \times 2$
- 2) $\frac{18}{30} =$ 5
- 3) $309 \div 29 =$ 29
- 4) $31 \div 6 =$ 2×3
- 5) $220 \div 24 =$ 2×3
- 6) $128 \div 13 =$ 13
- 7) $\frac{5}{21} =$ 3×7
- 8) $\frac{14}{20} =$ 2×5
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- 12) $65 \div 7 =$ 7
- 13) $35 \div 16 =$ $2 \times 2 \times 2 \times 2$
- 14) $275 \div 26 =$ 2×13
- 15) $82 \div 18 =$ 3×3

Answers

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