



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) $\frac{16}{27} =$ _____
- 2) $16 \div 3 =$ _____
- 3) $61 \div 19 =$ _____
- 4) $\frac{3}{5} =$ _____
- 5) $\frac{9}{11} =$ _____
- 6) $115 \div 30 =$ _____
- 7) $26 \div 4 =$ _____
- 8) $\frac{5}{6} =$ _____
- 9) $205 \div 21 =$ _____
- 10) $65 \div 17 =$ _____
- 11) $68 \div 13 =$ _____
- 12) $55 \div 9 =$ _____
- 13) $52 \div 7 =$ _____
- 14) $34 \div 15 =$ _____
- 15) $\frac{11}{16} =$ _____

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) $\frac{16}{27} = \underline{3 \times 3 \times 3}$
- 2) $16 \div 3 = \underline{3}$
- 3) $61 \div 19 = \underline{19}$
- 4) $\frac{3}{5} = \underline{5}$
- 5) $\frac{9}{11} = \underline{11}$
- 6) $115 \div 30 = \underline{2 \times 3}$
- 7) $26 \div 4 = \underline{2}$
- 8) $\frac{5}{6} = \underline{2 \times 3}$
- 9) $205 \div 21 = \underline{3 \times 7}$
- 10) $65 \div 17 = \underline{17}$
- 11) $68 \div 13 = \underline{13}$
- 12) $55 \div 9 = \underline{3 \times 3}$
- 13) $52 \div 7 = \underline{7}$
- 14) $34 \div 15 = \underline{3 \times 5}$
- 15) $\frac{11}{16} = \underline{2 \times 2 \times 2 \times 2}$

Answers

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