



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) $\frac{22}{27} =$ _____
- 2) $\frac{8}{28} =$ _____
- 3) $\frac{10}{20} =$ _____
- 4) $\frac{5}{16} =$ _____
- 5) $62 \div 13 =$ _____
- 6) $63 \div 6 =$ _____
- 7) $73 \div 11 =$ _____
- 8) $\frac{17}{29} =$ _____
- 9) $\frac{10}{19} =$ _____
- 10) $\frac{17}{24} =$ _____
- 11) $78 \div 15 =$ _____
- 12) $206 \div 21 =$ _____
- 13) $101 \div 10 =$ _____
- 14) $64 \div 7 =$ _____
- 15) $\frac{3}{26} =$ _____

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) $\frac{22}{27} = \underline{3 \times 3 \times 3}$

2) $\frac{8}{28} = \underline{7}$

3) $\frac{10}{20} = \underline{2}$

4) $\frac{5}{16} = \underline{2 \times 2 \times 2 \times 2}$

5) $62 \div 13 = \underline{13}$

6) $63 \div 6 = \underline{2}$

7) $73 \div 11 = \underline{11}$

8) $\frac{17}{29} = \underline{29}$

9) $\frac{10}{19} = \underline{19}$

10) $\frac{17}{24} = \underline{2 \times 2 \times 2 \times 3}$

11) $78 \div 15 = \underline{5}$

12) $206 \div 21 = \underline{3 \times 7}$

13) $101 \div 10 = \underline{2 \times 5}$

14) $64 \div 7 = \underline{7}$

15) $\frac{3}{26} = \underline{2 \times 13}$

Answers

1. R

2. R

3. T

4. T

5. R

6. T

7. R

8. R

9. R

10. R

11. T

12. R

13. T

14. R

15. R