



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.

$$\frac{5}{42} = 2 \times 3 \times 7 = 0.\overline{1190476}$$

1) $270 \div 28 =$ _____

2) $\frac{8}{11} =$ _____

3) $202 \div 23 =$ _____

4) $216 \div 22 =$ _____

5) $\frac{11}{19} =$ _____

6) $193 \div 24 =$ _____

7) $230 \div 30 =$ _____

8) $\frac{22}{29} =$ _____

9) $\frac{9}{25} =$ _____

10) $\frac{19}{20} =$ _____

11) $13 \div 5 =$ _____

12) $71 \div 9 =$ _____

13) $\frac{12}{27} =$ _____

14) $42 \div 8 =$ _____

15) $\frac{1}{2} =$ _____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____



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) $270 \div 28 =$ 2x7

2) $\frac{8}{11} =$ 11

3) $202 \div 23 =$ 23

4) $216 \div 22 =$ 11

5) $\frac{11}{19} =$ 19

6) $193 \div 24 =$ 2x2x2x3

7) $230 \div 30 =$ 3

8) $\frac{22}{29} =$ 29

9) $\frac{9}{25} =$ 5x5

10) $\frac{19}{20} =$ 2x2x5

11) $13 \div 5 =$ 5

12) $71 \div 9 =$ 3x3

13) $\frac{12}{27} =$ 3x3

14) $42 \div 8 =$ 2x2

15) $\frac{1}{2} =$ 2

Answers

1. R

2. R

3. R

4. R

5. R

6. R

7. R

8. R

9. T

10. T

11. T

12. R

13. R

14. T

15. T