



## Terminating and Repeating Decimals

Directions: Divide each Fraction to find the decimal. Tell whether the decimal is Terminating or Repeating. Then Choose the letter that expresses the correct way to Write decimal.

\_\_\_\_\_ 1.  $\frac{5}{8}$       a. 0.625.....      b.  $0.\overline{625}$       c. 0.625      1. \_\_\_\_\_

\_\_\_\_\_ 2.  $\frac{12}{40}$       a. 0.3      b.  $0.\overline{3}$       c. 0.33      2. \_\_\_\_\_

\_\_\_\_\_ 3.  $\frac{11}{12}$       a. 0.916      b.  $0.91\overline{6}$       c.  $0.\overline{916}$       3. \_\_\_\_\_

\_\_\_\_\_ 4.  $\frac{4}{9}$       a. 0.4      b.  $0.\overline{4}$       c.  $0.\overline{44}....$       4. \_\_\_\_\_

\_\_\_\_\_ 5.  $\frac{33}{100}$       a. 0.3      b.  $0.\overline{3}$       c. 0.33      5. \_\_\_\_\_

\_\_\_\_\_ 6.  $\frac{1}{7}$       a. 0.142857      b.  $0.1428\overline{57}$       c.  $0.\overline{142857}$       6. \_\_\_\_\_

\_\_\_\_\_ 7.  $2\frac{8}{11}$       a. 0.72      b. 2.72      c.  $2.\overline{72}$       7. \_\_\_\_\_

\_\_\_\_\_ 8.  $7\frac{19}{22}$       a. 7.863      b.  $7.86\overline{3}$       c.  $7.\overline{863}$       8. \_\_\_\_\_

\_\_\_\_\_ 9.  $\frac{15}{8}$       a. 1.875      b.  $1.87\overline{5}$       c.  $1.\overline{875}$       9. \_\_\_\_\_

\_\_\_\_\_ 10.  $\frac{55}{48}$       a. 1.14583      b.  $1.1458\overline{3}$       c.  $1.145\overline{83}$       10. \_\_\_\_\_

**4-5****Skills Practice*****Fractions and Decimals***

Write each repeating decimal using bar notation.

1. 0.7353535...

2. 0.424242...

3. 5.126126126...

Write each fraction or mixed number as a decimal. Use bar notation if the decimal is a repeating decimal.

4.  $\frac{3}{5}$

5.  $\frac{19}{20}$

6.  $3\frac{4}{5}$

7.  $\frac{23}{50}$

8.  $1\frac{5}{8}$

9.  $\frac{19}{25}$

10.  $4\frac{17}{37}$

11.  $5\frac{3}{11}$

12.  $\frac{17}{24}$

13.  $6\frac{7}{32}$

14.  $7\frac{9}{22}$

15.  $1\frac{17}{48}$

Write each decimal as a fraction in simplest form.

16. 0.8

17. 0.52

18. 0.92

19. 0.48

20. 0.86

21. 0.76

# Converting Fractions to Decimals (A)

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Convert each fraction to a decimal.

$$\frac{4}{6} =$$

$$\frac{1}{8} =$$

$$\frac{11}{12} =$$

$$\frac{14}{20} =$$

$$\frac{1}{3} =$$

$$\frac{2}{3} =$$

$$\frac{2}{5} =$$

$$\frac{4}{5} =$$

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

$$\frac{1}{4} =$$

$$\frac{5}{12} =$$

$$\frac{7}{9} =$$

$$\frac{5}{7} =$$

$$\frac{8}{10} =$$

$$\frac{6}{10} =$$

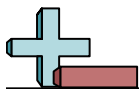
$$\frac{3}{5} =$$

$$\frac{16}{20} =$$

$$\frac{2}{7} =$$

$$\frac{9}{10} =$$

$$\frac{3}{20} =$$



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. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_
11. \_\_\_\_\_
12. \_\_\_\_\_
13. \_\_\_\_\_
14. \_\_\_\_\_
15. \_\_\_\_\_

1)  $31 \div 3 =$  \_\_\_\_\_

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

3)  $107 \div 28 =$  \_\_\_\_\_

4)  $\frac{4}{7} =$  \_\_\_\_\_

5)  $\frac{5}{13} =$  \_\_\_\_\_

6)  $\frac{7}{22} =$  \_\_\_\_\_

7)  $153 \div 25 =$  \_\_\_\_\_

8)  $271 \div 26 =$  \_\_\_\_\_

9)  $74 \div 12 =$  \_\_\_\_\_

10)  $\frac{2}{19} =$  \_\_\_\_\_

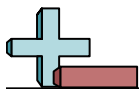
11)  $\frac{4}{5} =$  \_\_\_\_\_

12)  $166 \div 27 =$  \_\_\_\_\_

13)  $\frac{7}{8} =$  \_\_\_\_\_

14)  $\frac{7}{15} =$  \_\_\_\_\_

15)  $\frac{16}{23} =$  \_\_\_\_\_



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)  $10 \div 3 =$  \_\_\_\_\_

2)  $\frac{1}{8} =$  \_\_\_\_\_

3)  $\frac{16}{20} =$  \_\_\_\_\_

4)  $102 \div 19 =$  \_\_\_\_\_

5)  $\frac{2}{17} =$  \_\_\_\_\_

6)  $288 \div 27 =$  \_\_\_\_\_

7)  $\frac{11}{13} =$  \_\_\_\_\_

8)  $\frac{6}{16} =$  \_\_\_\_\_

9)  $196 \div 30 =$  \_\_\_\_\_

10)  $\frac{21}{24} =$  \_\_\_\_\_

11)  $101 \div 15 =$  \_\_\_\_\_

12)  $243 \div 26 =$  \_\_\_\_\_

13)  $45 \div 18 =$  \_\_\_\_\_

14)  $84 \div 22 =$  \_\_\_\_\_

15)  $144 \div 14 =$  \_\_\_\_\_

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_

13. \_\_\_\_\_

14. \_\_\_\_\_

15. \_\_\_\_\_

# Converting Fractions to Decimals (A) Answers

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Convert each fraction to a decimal.

$$\frac{4}{6} = 0.\bar{6}$$

$$\frac{1}{8} = 0.125$$

$$\frac{11}{12} = 0.91\bar{6}$$

$$\frac{14}{20} = 0.7$$

$$\frac{1}{3} = 0.\bar{3}$$

$$\frac{2}{3} = 0.\bar{6}$$

$$\frac{2}{5} = 0.4$$

$$\frac{4}{5} = 0.8$$

$$\frac{8}{11} = 0.\overline{72}$$

$$\frac{1}{4} = 0.25$$

$$\frac{5}{12} = 0.41\bar{6}$$

$$\frac{7}{9} = 0.\bar{7}$$

$$\frac{5}{7} = 0.\overline{714285}$$

$$\frac{8}{10} = 0.8$$

$$\frac{6}{10} = 0.6$$

$$\frac{3}{5} = 0.6$$

$$\frac{16}{20} = 0.8$$

$$\frac{2}{7} = 0.\overline{285714}$$

$$\frac{9}{10} = 0.9$$

$$\frac{3}{20} = 0.15$$



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.

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

Answers

1)  $10 \div 3 =$  3

2)  $\frac{1}{8} =$   $2 \times 2 \times 2$

3)  $\frac{16}{20} =$  5

4)  $102 \div 19 =$  19

5)  $\frac{2}{17} =$  17

6)  $288 \div 27 =$  3

7)  $\frac{11}{13} =$  13

8)  $\frac{6}{16} =$   $2 \times 2 \times 2$

9)  $196 \div 30 =$   $3 \times 5$

10)  $\frac{21}{24} =$   $2 \times 2 \times 2$

11)  $101 \div 15 =$   $3 \times 5$

12)  $243 \div 26 =$   $2 \times 13$

13)  $45 \div 18 =$  2

14)  $84 \div 22 =$  11

15)  $144 \div 14 =$  7

1. R

2. T

3. T

4. R

5. R

6. R

7. R

8. T

9. R

10. T

11. R

12. R

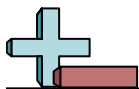
13. T

14. R

15. R







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.

$$\frac{5}{42} = 2 \times 3 \times 7 = 0.11\overline{90476}$$

Answers

1)  $31 \div 3 = \underline{3}$

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

3)  $107 \div 28 = \underline{2 \times 2 \times 7}$

4)  $\frac{4}{7} = \underline{7}$

5)  $\frac{5}{13} = \underline{13}$

6)  $\frac{7}{22} = \underline{2 \times 11}$

7)  $153 \div 25 = \underline{5 \times 5}$

8)  $271 \div 26 = \underline{2 \times 13}$

9)  $74 \div 12 = \underline{2 \times 3}$

10)  $\frac{2}{19} = \underline{19}$

11)  $\frac{4}{5} = \underline{5}$

12)  $166 \div 27 = \underline{3 \times 3 \times 3}$

13)  $\frac{7}{8} = \underline{2 \times 2 \times 2}$

14)  $\frac{7}{15} = \underline{3 \times 5}$

15)  $\frac{16}{23} = \underline{23}$

1. R

2. T

3. R

4. R

5. R

6. R

7. T

8. R

9. R

10. R

11. T

12. R

13. T

14. R

15. R