Rewriting Repeating Decimals

Name:

Rewrite each fraction as a decimal with repeating line.

1) $^{13}/_{18} =$ 0.722222222222222222222222222222222222

2) $^{1}/_{11} =$ 0.090909090909090909090909090909090909

3) $^{2}/_{9} =$ 0.222222222222222222222222222222222222

4) $^{11}/_{18} =$ 0.611111111111111111111111111111111111

5) $^{13}/_{9} =$ 1.444444444444444444444444444444444444

6) $^{11}/_{14} =$ 0.785714285714285714285714285714285714

7) $^{5}/_{3} =$ 1.666666666666666666666666666666666666

8) $^{16}/_{11} =$ 1.454545454545454545454545454545454545

9) $^{26}/_{15} =$ 1.733333333333333333333333333333333333

10) $^{1}/_{7} =$ 0.142857142857142857142857142857142857

11) $^{1}/_{13} =$ 0.076923076923076923076923076923076923

12) $^{6}/_{7} =$ 0.857142857142857142857142857142857142

13) $^{23}/_{13} =$ 1.769230769230769230769230769230769230

14) $^{29}/_{15} =$ 1.933333333333333333333333333333333333

15) $^{1}/_{14} =$ 0.071428571428571428571428571428571428

16) $^{7}/_{11} =$ 0.636363636363636363636363636363636363

17) $^{10}/_{11} =$ 0.909090909090909090909090909090909090

18) $^{10}/_{9} =$ 1.111111111111111111111111111111111111

19) $^{25}/_{13} =$ 1.923076923076923076923076923076923076

20) $^{1}/_{15} =$ 0.066666666666666666666666666666666666

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

1-10	95	90	85	80	75	70	65	60	55	50
11-20	45	40	35	30	25	20	15	10	5	0

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. $0.142\overline{857}$	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. $1.14\overline{583}$	10. _____

NAME _____ DATE _____ PERIOD _____

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.

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).

$^{6}/_{40} = {}^{3}/_{20} = 2\times2\times5 = 0.15$

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.

$^{5}/_{42} = 2\times3\times7 = 0.1\overline{190476}$

1) $31 \div 3 =$ _____

2) $^{1}/_{2} =$ _____

3) $107 \div 28 =$ _____

4) $^{4}/_{7} =$ _____

5) $^{5}/_{13} =$ _____

6) $^{7}/_{22} =$ _____

7) $153 \div 25 =$ _____

8) $271 \div 26 =$ _____

9) $74 \div 12 =$ _____

10) $^{2}/_{19} =$ _____

11) $^{4}/_{5} =$ _____

12) $166 \div 27 =$ _____

13) $^{7}/_{8} =$ _____

14) $^{7}/_{15} =$ _____

15) $^{16}/_{23} =$ _____

Answers

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

1-10	93	87	80	73	67	60	53	47	40	33
11-15	27	20	13	7	0					

Finding Repeating Decimals

Name:

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).

$\frac{6}{40} = \frac{3}{20} = 2\times2\times5 = 0.15$

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.

$\frac{5}{42} = 2\times3\times7 = 0.1\overline{190476}$

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) $144 \div 14 =$ _____

Answers

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

1-10	93	87	80	73	67	60	53	47	40	33
11-15	27	20	13	7	0					

Converting Fractions to Decimals (A) Answers

Name: _____ Date: _____

Convert each fraction to a decimal.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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).

$^{6}/_{40} = {}^{3}/_{20} = 2\times2\times5 = 0.15$

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.

$^{5}/_{42} = 2\times3\times7 = 0.1\overline{190476}$

1) $10 \div 3 =$ 3

2) $^{1}/_{8} =$ 2×2×2

3) $^{16}/_{20} =$ 5

4) $102 \div 19 =$ 19

5) $^{2}/_{17} =$ 17

6) $288 \div 27 =$ 3

7) $^{11}/_{13} =$ 13

8) $^{6}/_{16} =$ 2×2×2

9) $196 \div 30 =$ 3×5

10) $^{21}/_{24} =$ 2×2×2

11) $101 \div 15 =$ 3×5

12) $243 \div 26 =$ 2×13

13) $45 \div 18 =$ 2

14) $84 \div 22 =$ 11

15) $144 \div 14 =$ 7

Answers

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

1-10	93	87	80	73	67	60	53	47	40	33
11-15	27	20	13	7	0					

Rewriting Repeating Decimals

Name: **Answer Key**

Rewrite each fraction as a decimal with repeating line.

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7) $^{5}/_{3} =$ 1.666666666666666666666666666666666666

8) $^{16}/_{11} =$ 1.454545454545454545454545454545454545

9) $^{26}/_{15} =$ 1.733333333333333333333333333333333333

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12) $^{6}/_{7} =$ 0.857142857142857142857142857142857142

13) $^{23}/_{13} =$ 1.769230769230769230769230769230769230

14) $^{29}/_{15} =$ 1.933333333333333333333333333333333333

15) $^{1}/_{14} =$ 0.071428571428571428571428571428571428

16) $^{7}/_{11} =$ 0.636363636363636363636363636363636363

17) $^{10}/_{11} =$ 0.909090909090909090909090909090909090

18) $^{10}/_{9} =$ 1.111111111111111111111111111111111111

19) $^{25}/_{13} =$ 1.923076923076923076923076923076923076

20) $^{1}/_{15} =$ 0.066666666666666666666666666666666666

Answers

1. $0.7\overline{2}$
2. $0.\overline{09}$
3. $0.\overline{2}$
4. $0.6\overline{1}$
5. $1.\overline{4}$
6. $0.\overline{7857142}$
7. $1.\overline{6}$
8. $1.\overline{45}$
9. $1.7\overline{3}$
10. $0.\overline{142857}$
11. $0.\overline{076923}$
12. $0.\overline{857142}$
13. $1.\overline{769230}$
14. $1.9\overline{3}$
15. $0.\overline{0714285}$
16. $0.\overline{63}$
17. $0.\overline{90}$
18. $1.\overline{1}$
19. $1.\overline{923076}$
20. $0.0\overline{6}$

1-10	95	90	85	80	75	70	65	60	55	50
11-20	45	40	35	30	25	20	15	10	5	0

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).

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1) $31 \div 3 =$ 3

2) $^{1}/_{2} =$ 2

3) $107 \div 28 =$ 2×2×7

4) $^{4}/_{7} =$ 7

5) $^{5}/_{13} =$ 13

6) $^{7}/_{22} =$ 2×11

7) $153 \div 25 =$ 5×5

8) $271 \div 26 =$ 2×13

9) $74 \div 12 =$ 2×3

10) $^{2}/_{19} =$ 19

11) $^{4}/_{5} =$ 5

12) $166 \div 27 =$ 3×3×3

13) $^{7}/_{8} =$ 2×2×2

14) $^{7}/_{15} =$ 3×5

15) $^{16}/_{23} =$ 23

Answers

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

1-10	93	87	80	73	67	60	53	47	40	33
11-15	27	20	13	7	0					