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) $\frac{13}{19} =$ _____

2) $\frac{4}{5} =$ _____

3) $48 \div 10 =$ _____

4) $115 \div 25 =$ _____

5) $\frac{5}{8} =$ _____

6) $43 \div 20 =$ _____

7) $24 \div 7 =$ _____

8) $\frac{3}{6} =$ _____

9) $\frac{15}{26} =$ _____

10) $\frac{5}{9} =$ _____

11) $258 \div 28 =$ _____

12) $22 \div 4 =$ _____

13) $\frac{4}{17} =$ _____

14) $\frac{3}{22} =$ _____

15) $17 \div 3 =$ _____

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: **Answer Key**

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) $\frac{13}{19} =$ 19

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

3) $48 \div 10 =$ 5

4) $115 \div 25 =$ 5

5) $\frac{5}{8} =$ 2×2×2

6) $43 \div 20 =$ 2×2×5

7) $24 \div 7 =$ 7

8) $\frac{3}{6} =$ 2

9) $\frac{15}{26} =$ 2×13

10) $\frac{5}{9} =$ 3×3

11) $258 \div 28 =$ 2×7

12) $22 \div 4 =$ 2

13) $\frac{4}{17} =$ 17

14) $\frac{3}{22} =$ 2×11

15) $17 \div 3 =$ 3

Answers

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

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