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).

$\frac{6}{40} = \frac{3}{20} = 2 \times 2 \times 5 = 0.15$

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) $57 \div 17 =$ _____

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

3) $\frac{19}{25} =$ _____

4) $33 \div 4 =$ _____

5) $204 \div 23 =$ _____

6) $64 \div 22 =$ _____

7) $\frac{1}{12} =$ _____

8) $26 \div 6 =$ _____

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

10) $\frac{18}{30} =$ _____

11) $80 \div 18 =$ _____

12) $116 \div 14 =$ _____

13) $138 \div 28 =$ _____

14) $\frac{18}{20} =$ _____

15) $\frac{4}{26} =$ _____

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) $57 \div 17 =$ 17

2) $\frac{3}{8} =$ 2×2×2

3) $\frac{19}{25} =$ 5×5

4) $33 \div 4 =$ 2×2

5) $204 \div 23 =$ 23

6) $64 \div 22 =$ 11

7) $\frac{1}{12} =$ 2×2×3

8) $26 \div 6 =$ 3

9) $\frac{12}{13} =$ 13

10) $\frac{18}{30} =$ 5

11) $80 \div 18 =$ 3×3

12) $116 \div 14 =$ 7

13) $138 \div 28 =$ 2×7

14) $\frac{18}{20} =$ 2×5

15) $\frac{4}{26} =$ 13

Answers

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

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