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) $\frac{4}{11} =$ _____

2) $74 \div 28 =$ _____

3) $\frac{8}{12} =$ _____

4) $\frac{3}{18} =$ _____

5) $94 \div 24 =$ _____

6) $\frac{17}{29} =$ _____

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

8) $\frac{3}{5} =$ _____

9) $\frac{5}{6} =$ _____

10) $204 \div 27 =$ _____

11) $49 \div 13 =$ _____

12) $24 \div 10 =$ _____

13) $252 \div 26 =$ _____

14) $134 \div 16 =$ _____

15) $\frac{13}{21} =$ _____

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					

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

1) $\frac{4}{11}$ = 11

2) 74 ÷ 28 = 2×7

3) $\frac{8}{12}$ = 3

4) $\frac{3}{18}$ = 2×3

5) 94 ÷ 24 = 2×2×3

6) $\frac{17}{29}$ = 29

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

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

9) $\frac{5}{6}$ = 2×3

10) 204 ÷ 27 = 3×3

11) 49 ÷ 13 = 13

12) 24 ÷ 10 = 5

13) 252 ÷ 26 = 13

14) 134 ÷ 16 = 2×2×2

15) $\frac{13}{21}$ = 3×7

Answers

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