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.

$\frac{5}{42} = 2\times3\times7 = 0.1190476$

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

2) $\frac{12}{17} =$ _____

3) $61 \div 8 =$ _____

4) $184 \div 27 =$ _____

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

6) $151 \div 16 =$ _____

7) $\frac{4}{21} =$ _____

8) $29 \div 5 =$ _____

9) $\frac{5}{30} =$ _____

10) $251 \div 29 =$ _____

11) $55 \div 25 =$ _____

12) $\frac{4}{6} =$ _____

13) $47 \div 10 =$ _____

14) $135 \div 14 =$ _____

15) $89 \div 26 =$ _____

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					

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$\frac{5}{42} = 2\times3\times7 = 0.1190476$

1) $\frac{13}{15}$ = 3×5

2) $\frac{12}{17}$ = 17

3) 61 ÷ 8 = 2×2×2

4) 184 ÷ 27 = 3×3×3

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

6) 151 ÷ 16 = 2×2×2×2

7) $\frac{4}{21}$ = 3×7

8) 29 ÷ 5 = 5

9) $\frac{5}{30}$ = 2×3

10) 251 ÷ 29 = 29

11) 55 ÷ 25 = 5

12) $\frac{4}{6}$ = 3

13) 47 ÷ 10 = 2×5

14) 135 ÷ 14 = 2×7

15) 89 ÷ 26 = 2×13

Answers

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

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