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) $^{1}/_{17} =$ _____

2) $^{10}/_{28} =$ _____

3) $52 \div 7 =$ _____

4) $^{12}/_{15} =$ _____

5) $^{25}/_{26} =$ _____

6) $38 \div 9 =$ _____

7) $11 \div 5 =$ _____

8) $29 \div 6 =$ _____

9) $57 \div 21 =$ _____

10) $^{7}/_{11} =$ _____

11) $188 \div 30 =$ _____

12) $^{2}/_{18} =$ _____

13) $116 \div 14 =$ _____

14) $226 \div 22 =$ _____

15) $^{5}/_{8} =$ _____

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) $\frac{1}{17}$ = 17

2) $\frac{10}{28}$ = 2×7

3) 52 ÷ 7 = 7

4) $\frac{12}{15}$ = 5

5) $\frac{25}{26}$ = 2×13

6) 38 ÷ 9 = 3×3

7) 11 ÷ 5 = 5

8) 29 ÷ 6 = 2×3

9) 57 ÷ 21 = 7

10) $\frac{7}{11}$ = 11

11) 188 ÷ 30 = 3×5

12) $\frac{2}{18}$ = 3×3

13) 116 ÷ 14 = 7

14) 226 ÷ 22 = 11

15) $\frac{5}{8}$ = 2×2×2

Answers

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

1-10	93	87	80	73	67	60	53	47	40	33
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