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) $\frac{7}{30} =$ _____

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

3) $182 \div 25 =$ _____

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

5) $\frac{24}{29} =$ _____

6) $201 \div 22 =$ _____

7) $82 \div 8 =$ _____

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

9) $51 \div 21 =$ _____

10) $\frac{6}{16} =$ _____

11) $255 \div 26 =$ _____

12) $\frac{1}{5} =$ _____

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

14) $148 \div 15 =$ _____

15) $\frac{18}{28} =$ _____

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) $\frac{7}{30}$ = 2×3×5

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

3) 182 ÷ 25 = 5×5

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

5) $\frac{24}{29}$ = 29

6) 201 ÷ 22 = 2×11

7) 82 ÷ 8 = 2×2

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

9) 51 ÷ 21 = 7

10) $\frac{6}{16}$ = 2×2×2

11) 255 ÷ 26 = 2×13

12) $\frac{1}{5}$ = 5

13) $\frac{3}{4}$ = 2×2

14) 148 ÷ 15 = 3×5

15) $\frac{18}{28}$ = 2×7

Answers

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

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