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) $156 \div 16 =$ _____

2) $\frac{20}{29} =$ _____

3) $68 \div 25 =$ _____

4) $\frac{8}{11} =$ _____

5) $202 \div 20 =$ _____

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

7) $\frac{4}{23} =$ _____

8) $\frac{8}{9} =$ _____

9) $186 \div 24 =$ _____

10) $\frac{2}{6} =$ _____

11) $127 \div 26 =$ _____

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

13) $36 \div 17 =$ _____

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

15) $7 \div 2 =$ _____

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) $156 \div 16 =$ 2×2

2) $\frac{20}{29} =$ 29

3) $68 \div 25 =$ 5×5

4) $\frac{8}{11} =$ 11

5) $202 \div 20 =$ 2×5

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

7) $\frac{4}{23} =$ 23

8) $\frac{8}{9} =$ 3×3

9) $186 \div 24 =$ 2×2

10) $\frac{2}{6} =$ 3

11) $127 \div 26 =$ 2×13

12) $\frac{7}{21} =$ 3

13) $36 \div 17 =$ 17

14) $\frac{3}{4} =$ 2×2

15) $7 \div 2 =$ 2

Answers

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

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