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) $\frac{22}{27}$ = _____

2) $\frac{8}{28}$ = _____

3) $\frac{10}{20}$ = _____

4) $\frac{5}{16}$ = _____

5) $62 \div 13$ = _____

6) $63 \div 6$ = _____

7) $73 \div 11$ = _____

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

9) $\frac{10}{19}$ = _____

10) $\frac{17}{24}$ = _____

11) $78 \div 15$ = _____

12) $206 \div 21$ = _____

13) $101 \div 10$ = _____

14) $64 \div 7$ = _____

15) $\frac{3}{26}$ = _____

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

1) $\frac{22}{27}$ = 3×3×3

2) $\frac{8}{28}$ = 7

3) $\frac{10}{20}$ = 2

4) $\frac{5}{16}$ = 2×2×2×2

5) 62 ÷ 13 = 13

6) 63 ÷ 6 = 2

7) 73 ÷ 11 = 11

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

9) $\frac{10}{19}$ = 19

10) $\frac{17}{24}$ = 2×2×2×3

11) 78 ÷ 15 = 5

12) 206 ÷ 21 = 3×7

13) 101 ÷ 10 = 2×5

14) 64 ÷ 7 = 7

15) $\frac{3}{26}$ = 2×13

Answers

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

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