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) $\frac{5}{23} =$ _____

2) $\frac{21}{25} =$ _____

3) $\frac{7}{13} =$ _____

4) $73 \div 30 =$ _____

5) $61 \div 7 =$ _____

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

7) $77 \div 8 =$ _____

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

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

10) $107 \div 15 =$ _____

11) $40 \div 6 =$ _____

12) $\frac{16}{29} =$ _____

13) $139 \div 22 =$ _____

14) $86 \div 26 =$ _____

15) $\frac{13}{21} =$ _____

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					

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) $\frac{5}{23}$ = 23

2) $\frac{21}{25}$ = 5×5

3) $\frac{7}{13}$ = 13

4) 73 ÷ 30 = 2×3×5

5) 61 ÷ 7 = 7

6) $\frac{10}{24}$ = 2×2×3

7) 77 ÷ 8 = 2×2×2

8) $\frac{3}{4}$ = 2×2

9) $\frac{8}{9}$ = 3×3

10) 107 ÷ 15 = 3×5

11) 40 ÷ 6 = 3

12) $\frac{16}{29}$ = 29

13) 139 ÷ 22 = 2×11

14) 86 ÷ 26 = 13

15) $\frac{13}{21}$ = 3×7

Answers

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

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