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) $195 \div 30 =$ _____

2) $161 \div 18 =$ _____

3) $49 \div 24 =$ _____

4) $\frac{1}{2} =$ _____

5) $46 \div 22 =$ _____

6) $114 \div 11 =$ _____

7) $230 \div 28 =$ _____

8) $\frac{1}{3} =$ _____

9) $\frac{14}{21} =$ _____

10) $168 \div 17 =$ _____

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

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

13) $\frac{11}{25} =$ _____

14) $\frac{6}{9} =$ _____

15) $73 \div 12 =$ _____

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.

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$\frac{6}{40} = \frac{3}{20} = 2\times2\times5 = 0.15$

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) $195 \div 30 =$ 2

2) $161 \div 18 =$ 2×3×3

3) $49 \div 24 =$ 2×2×2×3

4) $\frac{1}{2} =$ 2

5) $46 \div 22 =$ 11

6) $114 \div 11 =$ 11

7) $230 \div 28 =$ 2×7

8) $\frac{1}{3} =$ 3

9) $\frac{14}{21} =$ 3

10) $168 \div 17 =$ 17

11) $\frac{3}{4} =$ 2×2

12) $\frac{6}{10} =$ 5

13) $\frac{11}{25} =$ 5×5

14) $\frac{6}{9} =$ 3

15) $73 \div 12 =$ 2×2×3

Answers

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