**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)** $\frac{2}{5} =$ _____

**2)** $47 \div 9 =$ _____

**3)** $141 \div 16 =$ _____

**4)** $108 \div 11 =$ _____

**5)** $\frac{9}{17} =$ _____

**6)** $\frac{12}{28} =$ _____

**7)** $\frac{8}{20} =$ _____

**8)** $\frac{2}{26} =$ _____

**9)** $7 \div 2 =$ _____

**10)** $57 \div 6 =$ _____

**11)** $\frac{10}{12} =$ _____

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

**13)** $\frac{1}{7} =$ _____

**14)** $94 \div 19 =$ _____

**15)** $89 \div 15 =$ _____

**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)** $\frac{2}{5} =$ 5

**2)** $47 \div 9 =$ 3×3

**3)** $141 \div 16 =$ 2×2×2×2

**4)** $108 \div 11 =$ 11

**5)** $\frac{9}{17} =$ 17

**6)** $\frac{12}{28} =$ 7

**7)** $\frac{8}{20} =$ 5

**8)** $\frac{2}{26} =$ 13

**9)** $7 \div 2 =$ 2

**10)** $57 \div 6 =$ 2

**11)** $\frac{10}{12} =$ 2×3

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

**13)** $\frac{1}{7} =$ 7

**14)** $94 \div 19 =$ 19

**15)** $89 \div 15 =$ 3×5

**Answers**

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



| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
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