# Finding Repeating Decimals

Name:

**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).

$\frac{6}{40} = \frac{3}{20} = 2 \times 2 \times 5 = 0.15$

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.

$\frac{5}{42} = 2 \times 3 \times 7 = 0.1\overline{190476}$

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

**2)** $\frac{1}{3} =$ _____

**3)** $149 \div 21 =$ _____

**4)** $\frac{2}{6} =$ _____

**5)** $48 \div 18 =$ _____

**6)** $84 \div 29 =$ _____

**7)** $\frac{6}{11} =$ _____

**8)** $169 \div 26 =$ _____

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

**10)** $\frac{3}{7} =$ _____

**11)** $19 \div 4 =$ _____

**12)** $\frac{14}{15} =$ _____

**13)** $\frac{3}{10} =$ _____

**14)** $\frac{11}{22} =$ _____

**15)** $111 \div 12 =$ _____

## 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 | | | | | |

Finding Repeating Decimals Name: **Answer Key**

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

**2)** $\frac{1}{3} =$ 3

**3)** $149 \div 21 =$ 3×7

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

**5)** $48 \div 18 =$ 3

**6)** $84 \div 29 =$ 29

**7)** $\frac{6}{11} =$ 11

**8)** $169 \div 26 =$ 2

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

**10)** $\frac{3}{7} =$ 7

**11)** $19 \div 4 =$ 2×2

**12)** $\frac{14}{15} =$ 3×5

**13)** $\frac{3}{10} =$ 2×5

**14)** $\frac{11}{22} =$ 2

**15)** $111 \div 12 =$ 2×2

**Answers**

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



| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1-10 | 93 | 87 | 80 | 73 | 67 | 60 | 53 | 47 | 40 | 33 |
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