# 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).

$^{6}/_{40} = {}^{3}/_{20} = 2\times2\times5 = 0.15$

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.

$^{5}/_{42} = 2\times3\times7 = 0.1\overline{190476}$

**1)** $^{8}/_{9}$ = _____

**2)** 54 ÷ 15 = _____

**3)** $^{11}/_{17}$ = _____

**4)** 60 ÷ 8 = _____

**5)** 41 ÷ 5 = _____

**6)** $^{1}/_{2}$ = _____

**7)** 10 ÷ 3 = _____

**8)** 56 ÷ 12 = _____

**9)** $^{15}/_{20}$ = _____

**10)** $^{13}/_{27}$ = _____

**11)** $^{6}/_{14}$ = _____

**12)** 104 ÷ 11 = _____

**13)** 220 ÷ 21 = _____

**14)** $^{21}/_{28}$ = _____

**15)** 90 ÷ 16 = _____

**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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$^{6}/_{40} = {}^{3}/_{20} = 2\times2\times5 = 0.15$

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.

$^{5}/_{42} = 2\times3\times7 = 0.1\overline{190476}$

**1)** $^{8}/_{9}$ = 3×3

**2)** 54 ÷ 15 = 5

**3)** $^{11}/_{17}$ = 17

**4)** 60 ÷ 8 = 2

**5)** 41 ÷ 5 = 5

**6)** $^{1}/_{2}$ = 2

**7)** 10 ÷ 3 = 3

**8)** 56 ÷ 12 = 3

**9)** $^{15}/_{20}$ = 2×2

**10)** $^{13}/_{27}$ = 3×3×3

**11)** $^{6}/_{14}$ = 7

**12)** 104 ÷ 11 = 11

**13)** 220 ÷ 21 = 3×7

**14)** $^{21}/_{28}$ = 2×2

**15)** 90 ÷ 16 = 2×2×2

**Answers**

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



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