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) $95 \div 25 =$ _____

2) $83 \div 30 =$ _____

3) $^{4}/_{6} =$ _____

4) $^{3}/_{17} =$ _____

5) $114 \div 12 =$ _____

6) $^{11}/_{26} =$ _____

7) $^{2}/_{10} =$ _____

8) $63 \div 27 =$ _____

9) $50 \div 7 =$ _____

10) $^{15}/_{23} =$ _____

11) $93 \div 20 =$ _____

12) $^{4}/_{11} =$ _____

13) $80 \div 22 =$ _____

14) $53 \div 21 =$ _____

15) $^{6}/_{29} =$ _____

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**

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) $95 \div 25 =$ 5

2) $83 \div 30 =$ $2\times3\times5$

3) $^{4}/_{6} =$ 3

4) $^{3}/_{17} =$ 17

5) $114 \div 12 =$ 2

6) $^{11}/_{26} =$ 2×13

7) $^{2}/_{10} =$ 5

8) $63 \div 27 =$ 3

9) $50 \div 7 =$ 7

10) $^{15}/_{23} =$ 23

11) $93 \div 20 =$ $2\times2\times5$

12) $^{4}/_{11} =$ 11

13) $80 \div 22 =$ 11

14) $53 \div 21 =$ 3×7

15) $^{6}/_{29} =$ 29

Answers

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

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