

Lesson 1:- Understand Rational Numbers

1. Sample answer: The decimal form of a rational number must terminate or repeat.
2. Sample answer: Divide the numerator by the denominator. Find digits in the quotient until you get a remainder of 0 or until decimal numbers repeat.
3. A terminating decimal is a decimal number that ends and a repeating decimal has repeating values.
4. a. 0.35
b. -1.15
c. 0.05
d. -2.72
5. 0.1893 miles
6. $0.\overline{6}$
7. $0.\overline{27}$
8. $8.\overline{4}$
9. Yes; the digits 2 and 7 repeat, so the number is rational.
10. C
11. a decimal that does not terminate
12. No; Yes; Yes
13. a. 2.625
b. She used the fraction digits as the decimal digits.
14. a. $a = 11, b = 3$
b. 0.27
15. 3.2
16. 9.47 pounds
17. No, it is not repeating, but it is rational. Sample answer: There is no indication that any of the digits repeat, but it is terminating and can be written as $9\frac{373}{1000}$
18. About 6.54 feet
19. 32.135
20. Yes; Sample answer: $10\frac{1}{3} = 10.\overline{3}$, or about 10.33, which is less than 10.38.
21. A
22. X $-\frac{5}{6}$ can be expressed as a repeating decimal.
X The digit that repeats is 3.