

6-38. See below:

a. The units of measurement, centimeters. Side #2 = x , Side #3 = $2x - 1$

b. $x + x + (2x - 1) = 31$

c. $x = 8$, so Side #1 = Side #2 = 8 cm and Side #3 = $2 \cdot 8 - 1 = 15$ cm.

6-39. 1,600,000 miles per day; $66,666.\bar{6}$ miles per hour.

6-40. She combined terms from opposite sides of the equation. Instead, line 4 should read $2x = 14$, so $x = 7$ is the solution.

6-41. See below:

a. geometric

b. $5^5 = 3125$

c. $a_n = 5^n$

6-42. C

6-43. $AC^2 = 3^2 + 7^2 = 58$, $AC = \sqrt{58} \approx 7.62$. The length of \overline{AC} is rounded up to 8 because the original measurements were whole numbers.