

Answer on Question #62301 – Math – Algebra

Question

The wettest April greatest rainfall amount for Albuquerque, NM, was recorded in 1905. The amount was 1.2 inches more than the amount recorded for the second wettest April in 2004. If the total rainfall for these two months was 7.2 inches, how much rain fell in April of each year?

Solution

Let x be the rainfall amount in April, 1905, and y be the amount recorded in April, 2004. The amount x is 1.2 inches more than the amount y , therefore we can write the following expression:

$$x - y = 1.2. \quad (1)$$

The total rainfall is equal to 7.2 inches and it is the sum of both rainfall amounts, so

$$x + y = 7.2. \quad (2)$$

Let's express x from expression (1) and plug it in the expression (2)

$$x = y + 1.2.$$

Then

$$y + 1.2 + y = 7.2;$$

$$2y = 7.2 - 1.2;$$

$$2y = 6;$$

Divide both sides by 2:

$$y = 3 \text{ (inches)}. \quad (3)$$

So, the rainfall amount in April, 2004, is 3 inches. Using (1) and (3) the amount registered in 1905 can be calculated as follows:

$$x - 3 = 1.2;$$

$$x = 3 + 1.2;$$

$$x = 4.2 \text{ (inches)}.$$

Answer: 4.2 inches in April, 1905; 3 inches in April, 2004.