Conditions

the average of two numbers is 4 1/8. If one number is 5 1/2, what is the other?

Solution

The average of 2 numbers is their sum divided on 2. Let's the second number is x, then:

$$\frac{x + 5\frac{1}{2}}{2} = 4\frac{1}{8}$$

Let's transform the fractions:

$$5\frac{1}{2} = \frac{11}{2}$$

$$4\frac{1}{8} = \frac{33}{8}$$

$$\frac{x + \frac{11}{2}}{2} = \frac{33}{8}$$

Multiplying each side on 8:

$$4x + 22 = 33$$

$$x = \frac{11}{4} = 2\frac{3}{4}$$

Answer: $2\frac{3}{4}$