

February 23rd

A man was asked the ages of his daughters. He replied

"twelve more than the sum of their ages is double the age of the elder, and ten more than the difference of their ages is the age of the younger. What are their ages?"

What are their ages?



If the daughters are  $x$  and  $y$  years old, where  $x$  is the elder:

$$x + y + 12 = 2x$$

$$x - y + 10 = y$$

Rearrange to give

$$x - y = 12$$

$$x - 2y = -10$$

Subtracting gives

$$\mathbf{y = 22}$$

$$\mathbf{x = 34}$$