$$y = \sqrt{(x+6)^2+25} + \sqrt{(x-6)^2+121}$$

The minimum of value of y must be zero. That is we now solve for x

$$\sqrt{(x+6)^2+25} = \cancel{+} -\sqrt{(x-6)^2+121}$$

$$\Rightarrow (x+6)^2+25 = (x-6)^2+121$$

$$\Rightarrow \cancel{x^2}+12x+\cancel{36}+25 = \cancel{x^2}-12x+\cancel{36}+121$$

$$\Rightarrow 24x = 121+25$$

$$\Rightarrow 24x = 146$$

$$\Rightarrow x = \frac{146}{24} = \frac{73}{12}.$$

for $x = \frac{73}{12}$, y attains its minimum value zero.