

$$\textcircled{1} a. \bar{x} = \cancel{1169.77} 1167.34$$

$$s = 252.94$$

$$n = 200$$

$$CI: \bar{x} \pm t^* \left( \frac{s}{\sqrt{n}} \right)$$

$$= 1167.34 \pm 2.626 \left( \frac{252.94}{\sqrt{200}} \right)$$

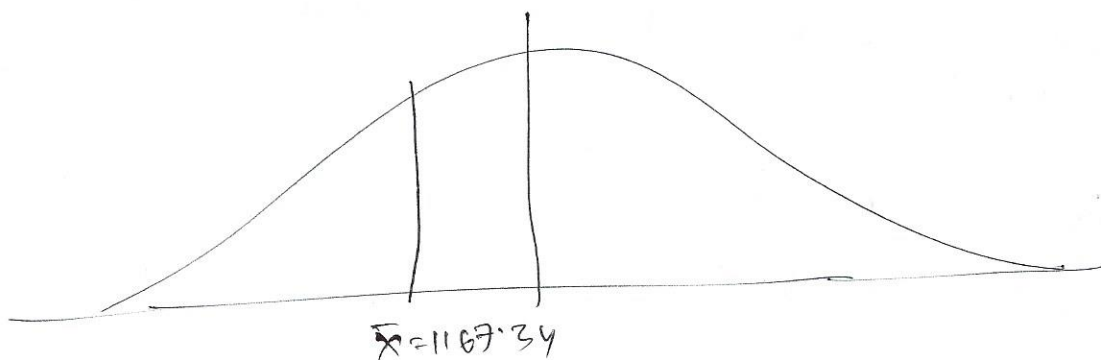
$$= 1167.34 \pm \cancel{42} 46.967$$

$$= 1120.37 \text{ to } 1214.30$$

$$H_0: \mu = 1190$$

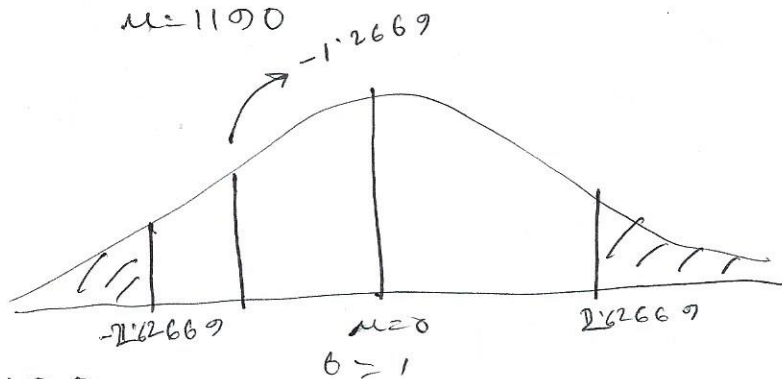
$$H_a: \mu \neq 1190$$

b



$$t = \frac{\bar{x} - \mu}{s/\sqrt{n}}$$

$t_0 =$



$$t = \frac{1167.34 - 1190}{252.94/\sqrt{200}}$$

$$= -1.2669$$

t-value is less than t-table-value. (2.826)

so, we fail to reject the  $H_0$ .

2.	$n = 12$	sample
	$\bar{x} = 42.5$	
	$\mu = 45.75$	pop <sup>n</sup>
	$\sigma = 3.8$	

$$a. \quad \bar{x} \pm z^* \frac{\sigma}{\sqrt{n}}$$

$$42.5 \pm 1.96 \frac{3.8}{\sqrt{12}}$$

$$42.5 \pm 2.15$$

$$40.35 \text{ to } 44.65$$

Since true POP mean 45.75 and is outside of this range, we have evidence that the vegetation children are not as tall.

$$d. \quad H_0: \mu = 45.75$$

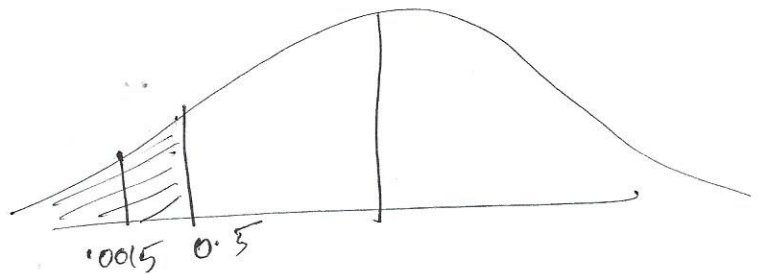
$$H_a: \mu \neq 45.75$$

$$z = \frac{\bar{x} - \mu}{\sigma/\sqrt{n}}$$
$$= \frac{42.5 - 45.75}{3.8/\sqrt{12}}$$

$$z = -2.9627$$

from table, .0015 < .05

so, reject  $H_0$ .



have enough evidence that 42.5 does not  
represent the pop<sup>n</sup>.

veg children seem to be shorter.

