

Intervalo de Confianza

Datos 95% Datos
 $n = 700$
 $\alpha = 0.95$
 $r = 10$
 $Z = \frac{r}{n} = \frac{0.95}{2} = 0.475 = 1.96$
 $x = 15$

$$\left[\bar{x} - 2\sqrt{\frac{r}{n}} ; \bar{x} + 2\sqrt{\frac{r}{n}} \right]$$

$$\left[15 - 1.96 \left(\sqrt{\frac{10}{700}} \right) ; \left[15 + 1.96 \left(\sqrt{\frac{10}{700}} \right) \right] \right]$$

$$\left[15 - 1.96 (0.37) ; \left[15 + 1.96 (0.37) \right] \right]$$
$$\left[15 - 0.7252 ; \left[15 + 0.7252 \right] \right]$$

14.2748 15.7252

Datos 90% Datos
 $n = 700$
 $\alpha = 0.90$
 $r = 10$
 $Z = \frac{r}{n} = \frac{0.90}{2} = 0.45 = 0.12$
 $x = 15$

$$\left[15 - 0.12 \left(\sqrt{\frac{10}{700}} \right) ; 15 + 0.12 \left(\sqrt{\frac{10}{700}} \right) \right]$$

$$\left[15 - 0.12 (0.37) ; 15 + 0.12 (0.37) \right]$$

$$\left[15 - 0.0444 ; 15 + 0.0444 \right]$$

$$\left[15 - 0.0444 ; 15 + 0.0444 \right]$$

14.9556 15.0444

Datos 99%

Datos
n = 550

$$n = 550$$

$$\alpha = 0.99$$

$$\alpha = 10$$

$$Z_{\frac{\alpha}{2}} = \frac{z}{2} = 0.99 = 0.495 = 2.58$$

$$x = 15$$

$$IC = \bar{x} \pm Z \frac{\sigma}{\sqrt{n}}$$

$$\begin{aligned}
 & \left[\bar{x} - Z \frac{\sigma}{\sqrt{n}} , \bar{x} + Z \frac{\sigma}{\sqrt{n}} \right] \\
 & \left(15 - 2.58 \left(\frac{10}{\sqrt{550}} \right) , 15 + 2.58 \left(\frac{10}{\sqrt{550}} \right) \right) \\
 & \left(15 - 2.58 (0.42) , 15 + 2.58 (0.42) \right) \\
 & \left(15 - 1.0836 , 15 + 1.0836 \right) \\
 & \quad 13.9164 \quad \quad 16.0836
 \end{aligned}$$

Datos 85%

Datos
n = 550

$$n = 550$$

$$\alpha = 0.85$$

$$\alpha = 10$$

$$Z_{\frac{\alpha}{2}} = \frac{z}{2} = 0.85 = 0.425 = 1.44$$

$$x = 15$$

$$\begin{aligned}
 & \left[15 - 1.44 \left(\frac{10}{\sqrt{550}} \right) , 15 + 1.44 \left(\frac{10}{\sqrt{550}} \right) \right] \\
 & \left(15 - 1.44 (0.42) , 15 + 1.44 (0.42) \right) \\
 & \left(15 - 0.6048 , 15 + 0.6048 \right) \\
 & \quad 14.3952 \quad \quad 15.6048
 \end{aligned}$$