

4-2.1 a) 0.3727

b) $1/12$

c) $n > 455$

4-4.1 a) 0.064

b) 0.0602

4-4.2 a) $118.66 \leq \bar{X} \leq 121.34$

b) $116.42 \leq \bar{X} \leq 123.58$

4-2.4 a) 0.2

b) Percentage in favor of A: p

$\Rightarrow \bar{X} = 2p - 1$

c) $n = 10^6$

4-4.3 a) $118.95 \leq \bar{X} \leq \infty$

b) $117.4 \leq X \leq \infty$

4-2.5 a) 0.9897

b) $n = 10$

c) $n = 17$

4-5.1 a) $t = 2.306 > 2.25$

$\Rightarrow$ claim justified

b) $t = 1.86 < 2.25$

$\Rightarrow$ claim rejected

4-2.6 a) 12.5

b) 11.218

c) $n = 12$

4-5.2 a) $z = 1.86 < 10.61$

$\Rightarrow$ claim rejected

b) $z = 1.397 < 10.61$

$\Rightarrow$ claim rejected

4-2.7 a) 0.663

b) 0.689

4-3.1 a) 0.0617

b) 1.0×10^{-3}

4-5.4 a) $t = 1.34$

The company can claim at 91 %

b) $\bar{X} = 3.997$

4-3.2 $n = 5002$

4-5.5 a) 99.78

b) 38.94

c) $t = 1.86 > 0.107$

$\Rightarrow$ claim valid

4-3.3 $n = 322$

$$4-6.1 \quad b) \quad y = 0.5455 + 0.6364x$$

$$4-6.2 \quad b) \quad y = 326.33 - 15.14z$$

$$\text{where } z = \log(x/0.00001)$$