

1.

a) $\frac{728}{1000} = 0.728$

b) $1.96 \cdot \sqrt{0.728 \cdot (1-0.728) \cdot 1000^{-0.5}} \cdot 100 = \pm 2.7580\%$

2. $0.5918757 \leq (p + (0.05, 79))$

3. a) 0.08 b) $1.96 \sqrt{\frac{0.28(1-0.28)}{50} + \frac{0.2(1-0.2)}{65}} \cdot 100 = \pm 15.79$

c) 0.08 ± 0.208

$\hookrightarrow 2.576 \cdot \sqrt{\frac{0.28(1-0.28)}{50} + \frac{0.2(1-0.2)}{65}}$

d) The interval is greater than the proportion difference

4. a) $\hat{p}_1 = 0.456, \hat{p}_2 = 0.342, \hat{p} = 0.424, z = 2.045$

b) $z > 1.645$ ✓ ~~and z-value is 2.045 > 1.645~~

c) reject null hypothesis

d) Favour who have seen is greater than Favour for freeze who have not

5. a) 1.3

b) 7.81

c) Reject Null hypothesis / wrong