Part 5.3 Questions

Fill in the blanks below. With each question the blanks get slightly bigger.

1. **Claim**: "More people have a favourable opinion of Donald Trump than Robert Mueller"
   Percentages from Survey: 36% have a favourable opinion of Robert Mueller, 42% of Trump
   Sample Sizes: 1,003 were asked about Robert Mueller, 1,500 about Trump
   Margin of Error: $1.5 \times \frac{1}{2}\left(\frac{1}{\sqrt{n_1}} + \frac{1}{\sqrt{n_2}}\right) = 1.5 \times \frac{1}{2}\left(\frac{1}{\sqrt{\ }} + \frac{1}{\sqrt{\ }}\right) =$ _____ (3sf) = _____%
   Construct the confidence interval: _____% ± _____% = (_____%, _____%)
   Interpret what this Means: We can say, with 95% confidence, the percentage of people who have a favourable opinion about Donal Trump is somewhere between _____ percentage points _____ and _____ percentage points _____ than the percentage of people who have a favourable opinion of Robert Mueller.
   Make a Judgement: This confidence interval _____ support the claim that a higher percentage of people have a favourable opinion of Donald Trump than Robert Mueller because _____.

2. **Claim**: "More people in Wellington have problems with damp houses than Auckland"
   Percentages from Survey: 56% in Auckland, 58% in Wellington
   Sample Sizes: Wellington: 548, Auckland 2746
   Margin of Error: $1.5 \times \frac{1}{2}\left(\frac{1}{\sqrt{n_1}} + \frac{1}{\sqrt{n_2}}\right) = 1.5 \times \frac{1}{2}\left(\frac{1}{\sqrt{\ }} + \frac{1}{\sqrt{\ }}\right) =$ _____ (3sf) = _____%
   Construct the confidence interval: _____% ± _____% = (_____%, _____%)
   Interpret what this Means: We can be fairly sure the percentage of _____ _____ is somewhere between _____ percentage points _____ and _____ percentage points _____ than the percentage of _____.
   Make a Judgement: This confidence interval _____ support the claim that a higher percentage of _____ than _____ because _____.

3. **Claim**: "A greater percentage of people from Christchurch think their city has got better in the last year compared with Porirua"
   Percentages from Survey: 56% Christchurch, 37% Porirua.
   Sample Sizes: Christchurch 487, Porirua 576
   Margin of Error: $1.5 \times \frac{1}{2}\left(\frac{1}{\sqrt{n_1}} + \frac{1}{\sqrt{n_2}}\right) = 1.5 \times \frac{1}{2}\left(\frac{1}{\sqrt{\ }} + \frac{1}{\sqrt{\ }}\right) =$ _____ (3sf) = _____%
   Construct the confidence interval: _____% ± _____% = (_____%, _____%)
   Interpret what this Means: It is a fairly safe bet the percentage of _____ _____ is somewhere between _____ percentage points _____ and _____ percentage points _____ than the percentage of _____.
   Make a Judgement: This confidence interval _____ support the claim that _____ _____ than _____ because _____.

4. **Claim**: "More females travel to school by car than males"
   Percentages from Survey: Females 42%, Males 35%
   Sample Sizes: Female 340, Male 330
   Margin of Error: $1.5 \times \frac{1}{2}\left(\frac{1}{\sqrt{n_1}} + \frac{1}{\sqrt{n_2}}\right) = 1.5 \times \frac{1}{2}\left(\frac{1}{\sqrt{\ }} + \frac{1}{\sqrt{\ }}\right) =$ _____ (3sf) = _____%
   Construct the confidence interval: _____% ± _____% = (_____%, _____%)
   Interpret what this Means: _____
   _____
   _____.
   Make a Judgement: _____
   _____.