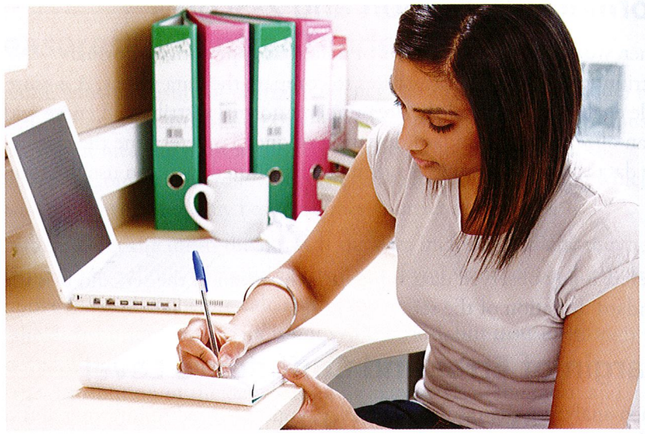
PROJECT EXAMPLE **Choosing tools to analyze your data**

Sarah chose the changes in population of the Western provinces and the territories over the last century as her topic. Below, she describes how she determined which statistical tools to use.



Sarah's Analysis

I obtained my data from a government census. Since a census surveys the entire population and not a sample, I do not need to consider margin of error or confidence level. I am using time series data, which shows trends from 1900 to 2000. The data is not normally distributed, so I do not need to use *z*-scores.

I could use a measure of central tendency to represent the "average" population of each province or territory over this period. I am not interested in frequency, so the mode is not appropriate. I think the mean would be the best measure to use in this situation. I could also look at the spread in population for each province or territory over this period using range and standard deviation. These values may allow me to compare the populations of the provinces and territories.

Your Turn

A. Which statistical tools are appropriate for your data? Explain why.

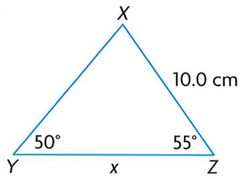
B. Use the tools you selected, and calculate the statistics.

C. Use these statistics to analyze your data.

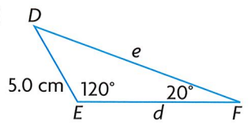
3-5 Cumulative Review

1. Determine the measure of all indicated sides to the nearest tenth of a unit.

a)



c)



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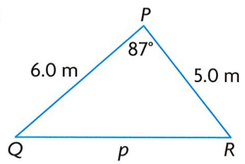
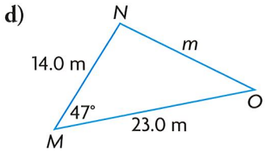
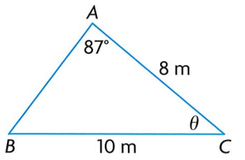


d)

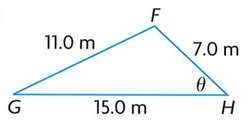


2. Determine the measure of each indicated angle to the nearest degree.

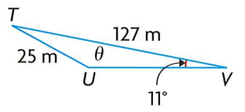
a)



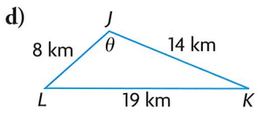
c)



b)



d)



3. In $\triangle HIJ$, $\angle I = 48°$, $i = 9$ cm, and $j = 11$ cm. Solve $\triangle HIJ$. Round your answers to the nearest tenth of a unit.

4. In $\triangle DEF$, $\angle D$ is 58°, e is 10.0 cm, and f is 14.0 cm. Solve $\triangle DEF$. Round your answers to the nearest tenth of a unit.

7 Project Connection

How accurate the weather predictions have been over last 30 years in Canada?

The Final Product and Presentation

Your final presentation should be more than just a factual written report of the information you have found. To make the most of your hard work, select a format for your final presentation that will suit your strengths, as well as your topic.

Presentation Styles

To make your presentation interesting, use a format that suits your own style. Here are some ideas:

- a report on an experiment or an investigation
- a summary of a newspaper article or a case study
- a short story, musical performance, or play
- a web page
- a slide show, multimedia presentation, or video
- a debate
- an advertising campaign or pamphlet
- a demonstration or the teaching of a lesson

Here are some decisions that other students have made about the format for their presentation:

Project 1: Weather Predictions
Muhamud has researched the mathematics of weather predictions. He has decided to make his presentation a demonstration of how a weather report is prepared, including the mathematics used, followed by an actual television weather report. He plans to submit a written report on his research and conclusions, as well.

Project 2: Gender Differences
Ming has studied the differences between the responses of females and males on cognitive aptitude tests. To illustrate her findings, she will have the class complete one of the assessment tasks during her presentation and then compare the results with standardized norms. In her report, Ming plans to include testing she has done on randomly selected students at her school.

Executive Summary

Sometimes, it is effective to give your audience an executive summary of your presentation. This is a one-page summary of your presentation, which includes your research question and the conclusions you have made. Ask your teacher about making copies of your summary for the class.

PROJECT EXAMPLE **Creating Your Presentation**

Sarah chose the changes in population of the Western provinces and the territories over the last century as her topic. Below, she describes how she determined which format to use for her presentation.

Sarah's Presentation

Because most of my supporting information is graphical, I am going to use a multimedia slide show. I will include some tables and graphs to show that the population of British Columbia and Alberta grew faster than the population of the rest of the Western and Northern provinces and territories. I will give all of the audience members an executive summary of my research, which will include my research question, my data (with the necessary supporting visuals), and my conclusions. I will give my teacher the full report.

Evaluating Your Own Presentation

Before giving your presentation, you can use these questions to decide if your presentation will be effective:

- Did I define my topic well? What is the best way to define my topic?
- Is my presentation focused? Will my classmates find it focused?
- Did I organize my information effectively? Is it obvious that I am following a plan in my presentation?
- Am I satisfied with my presentation? What might make it more effective?
- What unanswered questions might my audience have?

Your Turn

A. Does your topic suit some presentation formats better than others? Explain why.

B. From which presentation format, do you think your audience will gain the greatest understanding? Why?

C. Choose a format for your presentation, and create your presentation.

D. Use the questions provided in Evaluating Your Own Presentation to assess your presentation. Make any changes that you think are needed, as a result of your evaluation.