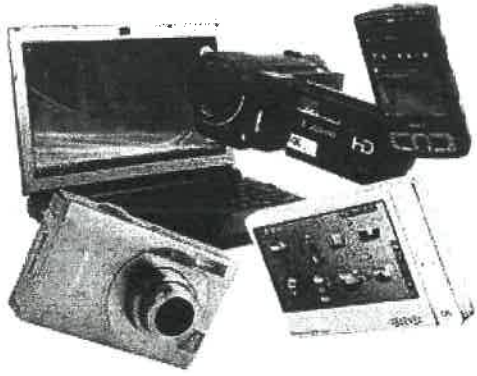


Introduction:



Investigate different payment schemes for buying/selling a new device.

You will be assessed on the quality of your reasoning and how well you link the relevant concepts and representations to your context.

Show all relevant working and diagrams. Use appropriate mathematical statements to communicate your findings.

Task:

In choosing your payment methods, using sequences and series, ensure that they demonstrate the following:

Evidence for Achievement	Evidence for Merit	Evidence for Excellence
<p>Apply sequences and series in solving problems:</p> <ul style="list-style-type: none"> Select and use at least 2 methods from: <ul style="list-style-type: none"> <input type="checkbox"/> The general term of a sequence <input type="checkbox"/> A partial sum of a sequence <input type="checkbox"/> The sum to infinity of a geometric series <input type="checkbox"/> Finding the value of the first term, common difference or common ratio of a sequence <input type="checkbox"/> Finding the number of terms in a sequence Demonstrate knowledge of concepts and terms Communicate using appropriate representations <p>2 skills</p> <p>Basic communication</p>	<p>Apply sequences and series, using relational thinking, in solving problems will involve ONE or more of:</p> <ul style="list-style-type: none"> Selecting and carrying out a logical sequence of steps Connecting different concepts or representations Demonstrating understanding of concepts Forming and using a model <p>AND</p> <p>communicate thinking by clearly indicating what calculations are for and relating findings to a context, using appropriate mathematical statements</p> <p>Answers question</p> <p>Interprets solution in context</p>	<p>Apply sequences and series, using extended abstract thinking, in solving problems will involve ONE or more of:</p> <ul style="list-style-type: none"> Devising a strategy to investigate a situation Identifying relevant concepts in context Developing a chain of logical reasoning, or proof Forming a generalisation <p>AND</p> <p>communicate by also using correct mathematical statements, or communicating mathematical insight.</p> <p>Investigates further around the original context/problem for a relevant purpose</p> <p>Interprets solution in context</p> <p>Clear communication</p>

Wellington High School
Te Kura Tuarua o Taraika ki Pukeahu
Mathematics Department Authenticity Statement



[Redacted Signature]

I attest that the work I am submitting is my own and not the work of others.

I understand if I am found to have impersonated or submitted material that is not my own work, including failure to establish authenticity, then my grade will be **NOT ACHIEVED**. I will lose the credits and the breach will be reported to the Principal's nominee who will notify my parents/ whānau.

Signed: _____ (student) Date: 14/5/19

Outline of task

I want to buy a computer for myself. I looked into options of payment for a particular computer.

Option A) pay \$450 upfront then \$60 each month for the first month, then every month after \$2 less - pay this for 24 months (2 years)

Option B) pay \$500 upfront then \$50 for the first month, then every month after 3% less - pay this for 24 months (2 years)

① How much will I be paying for each scheme (A & B) in the first 12 months?

② How much will I be paying overall/total (in the first 24 months)?

Teacher sign off: _____

③ Which option should I choose?