

Grade 5 – N02 within Unit 1: Numbers to 1 000 000

N01 Students will be expected to use estimation strategies, including front-end, front-end adjusted, rounding, and compatible numbers in problem solving contexts. [C, CN, ME, PS, R, V]

Performance Indicators

N02.01 Provide a context for when estimation is used to make predictions, check the reasonableness of an answer, and determine approximate answers.

N02.02 Describe contexts in which overestimating is important.

N02.03 Determine the approximate solution to a given problem not requiring an exact answer.

N02.04 Estimate a sum, a difference, a product, or a quotient using an appropriate strategy.

N02.05 Select and explain an estimation strategy for a given problem.

** At this point in the year, students are beginning to develop meaning for numbers from 10 000 to 1 000 000. It would be appropriate for students to be working with any five- and six-digit numbers, however, proficiency with the full range of numbers 10 000 to 1 000 000 is not expected in unit 1.*

Limited	Developing	Competent	In-Depth
Student can recognize that estimation can be used to find an approximate answer in familiar situations. Student can estimate some sums and differences when modelling a strategy using a concrete or visual tool. Student recognizes that some estimates are too high or too low.	Student can identify situations where estimation is useful to make predictions, check reasonableness, or determine an approximate answer. Student can estimate some sums, differences, products, or quotients using a familiar estimation strategy (e.g., rounding or front-end estimation). Student can identify some situations where overestimating may be important. Student can determine a reasonable approximate solution for some problems and explain how the estimate was obtained. Student can select a familiar estimation strategy and provide a simple explanation.	Student can explain when and why estimation is used to make predictions, check reasonableness, and determine approximate answers in a variety of contexts. Student can estimate sums, differences, products, and quotients using appropriate strategies such as front-end, front-end adjusted, rounding, or compatible numbers. Student can describe contexts in which overestimating is important and explain why it is useful. Student can determine reasonable approximate solutions for a variety of problems and explain their strategy.. Student can select and explain an appropriate estimation strategy for a given problem.	Student can justify the use of estimation in complex contexts and explain the advantages and limitations of estimated versus exact answers. Student can flexibly select among multiple estimation strategies and compare the efficiency and accuracy of different approaches. Student can analyze situations to determine whether overestimating or underestimating is more useful and justify their reasoning. Student can evaluate the reasonableness of estimates and explain the impact of adjustments made when estimating. Student can justify strategy selection, compare alternative strategies, and explain why one strategy is more effective or efficient in a given context.