



Graduation Numeracy Assessment Video Series

Activating Thinking and Collaboration Guide Giving Out Bonuses Situation



BRITISH
COLUMBIA

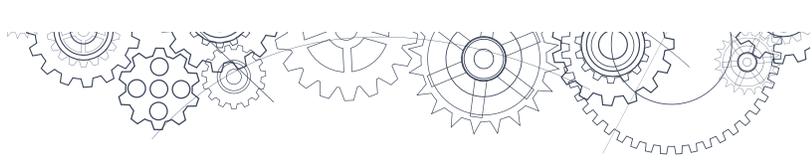
Ministry of
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November 2017

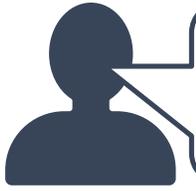
Use this guide with the Situation & Questions document, and while watching and discussing the video series. This guide can assist you with how to approach and work through the five numeracy processes within a typical situation you will encounter in the Numeracy Assessment (Interpret, Apply, Solve, Analyze and Communicate). Work through this guide on your own or collaborate with your peers.

For each question:

1. Read the question.
 2. Think about the smaller-scope questions you need to ask in order to answer the question (considerations).
 3. Use the numeracy processes to answer the question.
 4. Think about how your answer could be connected to the other questions related to the situation (extensions).
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Interpret



Interpret questions ask you to read the situations and decide what information is relevant to solving the problem.

- 1. What questions do you need to ask in order to make a decision about who gets the bonuses?**

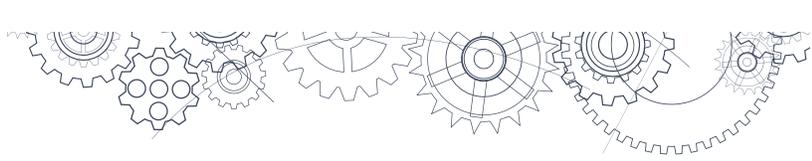
Considerations

1. As the manager at Text 'N' Talk, you received this Sales Report. What do you notice about the report and what assumptions might you need to make?
2. If you had to decide whom to give the bonuses to, what information would help you to make your decision? What would be your criteria?

Extensions

1. What additional conditions might you want to consider when deciding who should receive the bonuses?





Apply



Apply questions ask you to translate real world problems into mathematical language. You may need to choose appropriate tools to solve problems, organize and connect information, and create relationships.

2. You decide to do the following computation with Steven's Sales Report, $\frac{55}{7}$. What are you calculating?

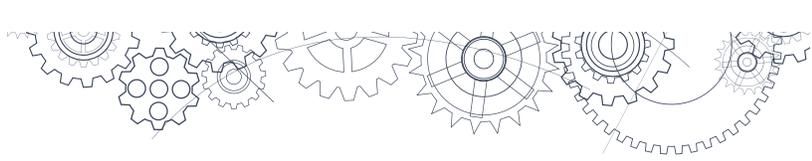
Considerations

1. How would you write an expression to calculate the number of phones Steven sold in one month?
2. What does the number 7 refer to in $\frac{55}{7}$?
3. Can you present the Sales Report information in a similar way for all sales team members?
4. How might you reorganize the Sales Report information to make it easier to compare?

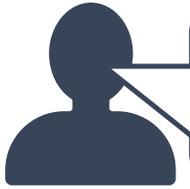
Extensions

1. What are other expressions and/or equations that could provide relevant information about the situation? (These expressions and/or equations do not have to be directly linked to the bonus structure.)





Solve



Solve questions ask you to solve mathematical problems. You may also need to check mathematical solutions.

3. Of Avery, Diana, Ainsley and Jasmine, which sales person sold the most phones in April?

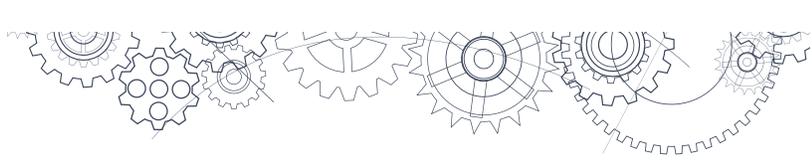
Considerations

1. How would you determine the total number of phones sold in April for Avery, Diana, Ainsley and Jasmine?
2. What different approaches can you use to calculate monthly phone sales? Which approach is likely more accurate?
3. Compare April phone sales for Avery, Diana, Ainsley and Jasmine. Order the sales people in order from the most phones sold to the least.

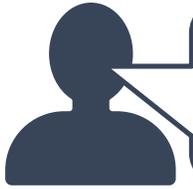
Extensions

1. Complete other relevant calculations with the Sales Report information, for example,
 - a. Whose number of phones sold is closest to their team's average?
 - b. Who sold the fewest number of phones in April?
 - c. How many more phones did the top-performing sales person sell compared with the bottom-performing sales person?
2. Determine how you could graphically illustrate the Sales Report information to compare individual and team sales. Create your graphic.





Analyze



Analyze questions ask you to make sense of mathematical solutions in context. You may need to assess the practicality and possible limitations of solutions, identify possible improvements to an approach, or relate the solution to other contexts.

4. You calculate April phone sales from the information your sales team members provided. Gabrielle reports 4113 phones sold in the last year. You decide that the fair way to calculate Gabrielle's April phone sales is to divide this number by 12, giving her 342.75, or approximately 343 phones sold.

Why might some of your sales team members disagree with your approach?

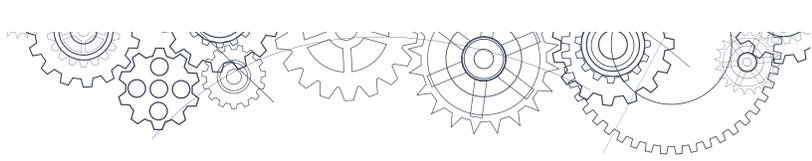
Considerations

1. What Sales Report information is provided about Gabrielle's phone sales?
2. In what other ways could Gabrielle's April phone sales be calculated?
3. What assumptions did you make when calculating Gabrielle's April phone sales? An example of an assumption is "all months have 30 days".
4. For each assumption, suggest how another sales team member may argue against it.
5. What do you think is the fairest method for reporting sales?

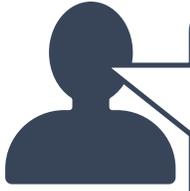
Extensions

1. Suggest what additional information could be used to help solve a relevant problem. For example, a problem could be, "Which sales team member would have generated the largest profit?" The Sales Report would then need to include expenses, time spent on each sale, which phone plan was the most popular, etc.





Student-Choice



Answering an extensive constructed-response question involves interpreting, applying, solving, analyzing, and then communicating your solution. You will need to include detailed explanations, justify your thinking, and present your mathematical solution in context. Remember to state any assumptions you used.

5. Which sales team should get the bonus?

Explain and justify your solution.

Considerations

1. Summarize the information for each sales team.
2. Is the total number of phones sold a fair way to compare teams?
3. How would you compare the Sales Report information for each sales team?

Extensions

1. How would you divide the money for the team bonus?
2. Suggest reasons why sales team members might have reported using different units in the Sales Report.
3. You receive an email from your boss requesting feedback on how the bonus plans should be revised. Make suggestions to improve the fairness of the plans.

