



Setting Goals

Part A Students use their knowledge of comparing whole numbers to place numbers listed in a table in order from least to greatest. Point out to students that the whole numbers in the table are aligned according to place value. Start comparing the greatest value digit located on the left which is 2 for all the numbers in the table. They need to look at the next highest place-value digit, which is in the hundred thousands place. Show them there is a 6, 5, 8, 3, 7, 6, and 3. The two 3s have the least value. Compare 2,384,201 and 2,384,198 to see which is the least. The digits are the same until you reach the hundreds place. Since 1 is less than 2, the least number is 2,384,198 and 2,384,201 is next. Repeat the process to find the next number to list from least to greatest.

Part B Students should compare 2,300,000 with the other numbers in the chart to determine why 2,300,000 components is an inappropriate goal. Have students compare 2,300,000 with the least value number 2,384,198. Then ask, *Why might this goal not be appropriate?*

Part C Students must set a goal that will be the third highest value of the numbers already listed in least-to-greatest order. This value will fall between the 5th and 6th numbers listed. If needed, show students that this goal has to be between the 5th and 6th number in the least to greatest list.

Performance Task Rubric

Task Scenario Students will order whole numbers to create a yearly production goal for a factory that produces components for game consoles.

Depth of Knowledge DOK2, DOK3

Scoring Rubric	
Part A 2 points	Full Credit 2,384,198; 2,384,201; 2,500,197; 2,659,051; 2,679,051; 2,799,125; 2,834,180
	Partial Credit 1 point will be given for listing the numbers from greatest to least.
	No Credit No credit will be given for any other listing.
Part B 2 points	Full Credit Students state the goal is lower than any other year.
	Partial Credit 1 point will be given for an answer that indicates that 2,300,000 is too low, but fails to indicate that it would be the lowest in the last seven years.
	No Credit No points will be given for an answer that does not indicate the low nature of the goal.
Part C 2 points	Full Credit Student's answer is between 2,679,051 and 2,799,125 in order to meet the requirement "third highest." Sample answer: 2,680,000 components
	Partial Credit 1 point will be given for an answer that is missing the label "components."
	No Credit No points will be given for an incorrect answer.



PERFORMANCE TASK

Setting Goals

Part D Students must compare the goal they set in Part C and 2,700,000. They must interpret “at least 2,700,000” in order to determine whether or not the goal meets the requirement. They will use their comparison as an explanation if it meets the requirement. If the goal does not meet the requirement, they will have to change their goal to a value greater than or equal to 2,700,000 while maintaining a position of third highest. Have the students compare the goal value in Part C and the value 2,700,000. Ask, *Is the goal greater than or equal to 2,700,000?* Remind students who answer *no* that the new goal has to be between 2,700,000 and 2,799,125 (the 6th number on the least to greatest list) to meet both requirements.

Part E Students must add years 6, 7, and the goal set in Part D (or Part C if it was not changed). Then, they will compare this total and 7,709,000. They will see that the total they calculated is greater. If needed, show students they need to add 2,679,051 (6th year total), 2,384,198 (7th year total), and the goal set in Part D (or Part C if it was not changed). Have students compare the total and the number 7,709,000. Ask, *Does this total meet the new requirement set by the factory manager’s supervisor? Why?*

Performance Task Rubric (continued)

Task Scenario Students will order whole numbers to create a yearly production goal for a factory that produces components for game consoles.

Depth of Knowledge DOK2, DOK3

Scoring Rubric	
Part D 2 points	<p>Full Credit If student’s answer is yes, the student explains why. If student’s answer is no, the student offers a new goal that meets both requirements. Sample answer (No): No, my answer is less than 2,700,000 components. A better goal would be 2,700,500 components. This number is greater than 2,700,000 and still the third highest number. Sample answer (Yes): Yes, my goal is greater than 2,700,000 components and is third highest.</p>
	<p>Partial Credit 1 point will be given for an answer that correctly identifies the goal as not meeting the requirement, but does not offer another solution. 1 point will be given for an answer that correctly identifies the goal as meeting the requirement, but does not explain why.</p>
	<p>No Credit No points will be given for an incorrect answer.</p>
Part E 2 points	<p>Full Credit The student states the goal will be met and explains that the sum of years 6, 7, and 8 is greater than 7,709,000 components.</p>
	<p>Partial Credit 1 point will be given for an answer that correctly identifies the goal will be met but does not offer a reasonable explanation.</p>
	<p>No Credit No points will be given for an incorrect answer.</p>

TOTAL 10 points maximum