

Mathematics, Grade 10

Session 1, Open-Response Question



- 17** Casey placed six identical cards in a box. Each card was marked with one integer using each of the integers 0, 1, 2, 3, 4, and 5 once. Casey drew two cards at random, one at a time, without replacing the first card.
- Make a list, chart, or diagram of the possible outcomes when choosing two cards in this manner.
 - What is the probability that the sum of the integers on the two cards is greater than 9?
 - Based on your response to part a., what is the most frequently occurring sum of the integers? What is the probability that this sum will occur?

Reporting Category for Item 17: Data Analysis, Statistics, and Probability

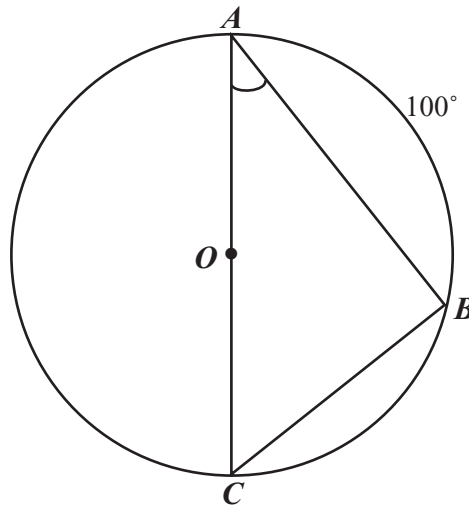
Session 1, Short-Answer Questions



- 18 What is the simplest form of the expression $\frac{2x^4y^2}{x^2y^2}$, $x \neq 0$, $y \neq 0$?

Reporting Category for Item 18: **Patterns, Relations, and Algebra**

Use the figure below to answer question 19.



- 19 Triangle ABC is inscribed in a circle O . What is the measure of $\angle A$?

Reporting Category for Item 19: **Geometry**

Session 1, Open-Response Questions

- 20** Theresa took a test that had a total of 50 questions. There were 20 open-response questions and 30 short-answer questions on the test.
- There was a total of 100 points on the test; each question on the test was worth the same number of points. How many points was each question worth? Show your work or explain how you obtained your answer.
 - Suppose that 90% was the minimum score required in order to earn an A on this test. How many questions could Theresa answer incorrectly and still earn an A? Show your work or explain how you obtained your answer.
 - If Theresa answered all of the short-answer questions correctly, what is the minimum percent of open-response questions that Theresa must answer correctly in order to receive a score of 90% on the test? Show your work or explain how you obtained your answer.

*Reporting Category for Item 20: **Number Sense and Operations***