

Student Name _____

New Jersey Assessment of Skills & Knowledge 2007



Grade 6



Language Arts Literacy/ Mathematics

Assessment Samples

NJ ASK 2007 Grade 6 Assessment Samples

Mathematics

- 1 Adnan asked 20 friends to tell him their favorite season of the year. Autumn was the favorite season of the year for 30% of Adnan's friends. How many of his friends chose autumn?
- A. 3
 - B. 4
 - C. 5
 - D. 6

- 2 Mrs. Baumann needs to replace the permanent markers for her art classes. She must buy 1 marker for each student. At the store, the markers come in different-sized packs. She can buy packs of 12 for \$2.40 per pack or packs of 24 for \$4.50 per pack.

Mrs. Baumann's Art Classes

Class Period	Number of Students
Period 1	19
Period 2	26
Period 3	25
Period 4	16
Period 5	32

If she estimated that she needs 8 packs of 12, which of the following would be true?

- A. She overestimated the number of markers needed.
- B. She underestimated the number of markers needed.
- C. She would have more markers if she bought 4 packs of 24.
- D. She would have spent more for the markers buying 4 packs of 24.



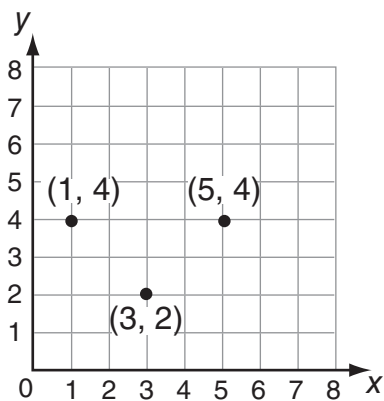
- 3** Which of the following would best be measured using square centimeters?
- A.** the length of a bee
 - B.** the weight of an ant
 - C.** the area of a book cover
 - D.** the volume of water in a swimming pool
- 4** Lou was writing a report about the Exxon Valdez oil spill for science class. He learned that 10,080,000 gallons of crude oil spilled near Alaska. Lou estimated that if an Olympic-sized swimming pool holds about 650,000 gallons of water, it would take about 25 of the pools to hold all the oil that spilled. Which of the following is a true statement about this estimate?
- A.** It is an overestimation by about 9 pools.
 - B.** It is an underestimation by about 5 pools.
 - C.** It is an accurate estimate about the number of pools.
 - D.** More information is needed to determine the accuracy of the estimate.

Mathematics

- 5 Yolanda and Michelle go out to lunch. They each decide to order the lunch special that costs \$4.95. The tip is 15%, and tax is 5%. They estimate they have just enough money. About how much money do the girls have?

- A. \$6.00
- B. \$9.00
- C. \$10.00
- D. \$12.00

- 6 Amy is using a coordinate grid to create a quadrilateral with 4 right angles.



Where would she plot the next point?

- A. (4, 5)
- B. (6, 3)
- C. (7, 2)
- D. (3, 6)

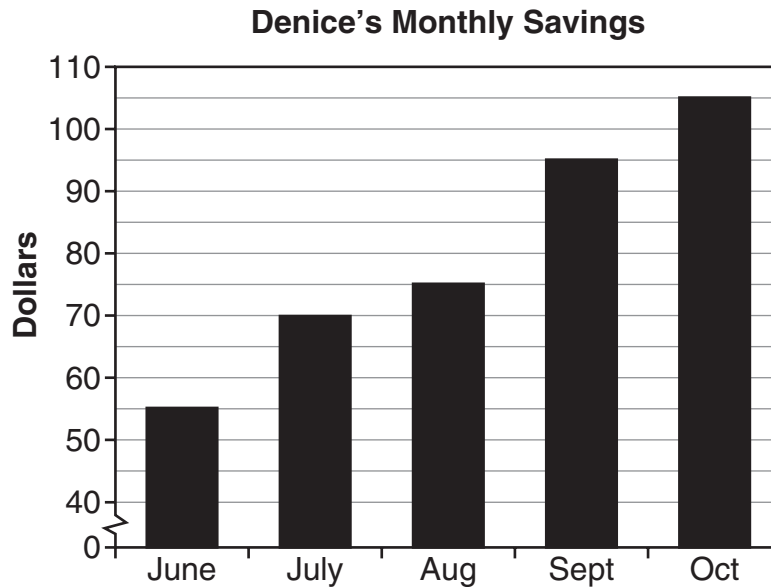
- 7 The table below shows the rate of growth of a flower over a 9-month period. In the table, x represents the number of months, and y represents the number of inches grown.

x	y
1	1
3	2
5	3
7	4
9	6

Which of the following is true about the graph that would result from plotting these ordered pairs on a coordinate grid?

- A. It would show a linear relationship.
- B. It would show a steep decreasing trend.
- C. It would show a steadily increasing trend.
- D. It would show a pattern of level plots across the x -axis.

- 8 Denice is saving her allowance that she earns from doing chores. The graph below shows how much she has saved each month.



Based on the trend in the graph, which of the following would you expect for Denice to do in the month of December?

- A. save less money than she will in January
- B. save less money than she did in November
- C. save the same amount of money she saved in November
- D. save more money than she did in the previous months combined

Mathematics

- 9** Damien wants to know what percent of the students at his school attended the school dance. He determines the total number of people at the school, n , and the total number of people who went to the dance, d . Which expression can Damien use to determine the percent?
- A.** $d - n$
- B.** $d - (n - d)$
- C.** $\frac{d}{n} \cdot 100$
- D.** $(n - d)/d$
- 10** Dory went hiking along the Appalachian Trail in Stokes State Forest. She hiked about 100 meters before realizing she forgot her water bottle. About how many feet had she hiked?
- A.** 30
- B.** 100
- C.** 300
- D.** 1,000
- 11** The students at Sanders Elementary School sold a total of 525 raffle tickets for their annual fundraiser. In a raffle, people buy tickets hoping to win a prize. For this fundraiser, only 1 ticket will be drawn and 1 prize given away. Sergio bought 15 tickets. What is the probability that Sergio will win the prize?
- A.** $\frac{1}{15}$
- B.** $\frac{1}{35}$
- C.** $\frac{1}{52}$
- D.** $\frac{1}{525}$

- 12** Mrs. Kabel is making a new vegetable garden. She needs to add a total of 75 cubic feet of dirt to her garden. Each bag of dirt contains 2 cubic feet of dirt. Mrs. Kabel estimates that she needs about 140 bags. Which statement best describes her estimate?
- A.** It is an overestimate because she needs to add only 38 bags to cover the 75 cubic feet.
 - B.** It is an overestimate because she needs to add only 75 bags to cover the 75 cubic feet.
 - C.** It is an underestimate because she needs to add 150 bags to cover the 75 cubic feet.
 - D.** Her estimate of how many bags of dirt she needs is correct.

- 13** Roberto made the following table to show how many horses, saddles, and riders he has on his ranch.

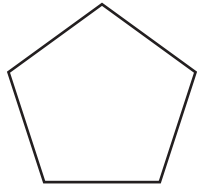
Roberto's Ranch

Horse	Saddle	Rider
Appaloosa	Black	Sam
Mustang	Brown	Leah
Palomino	Tan	Hank
Thoroughbred		Meg

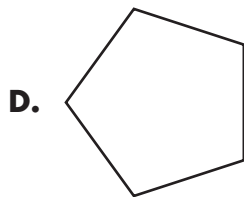
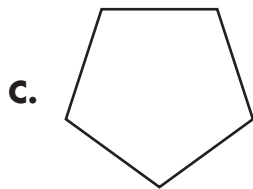
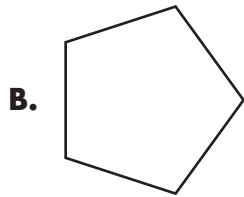
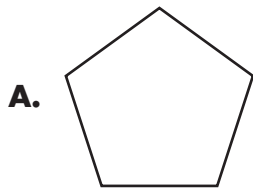
How many combinations of one horse, one saddle, and one rider can Roberto make?

- A.** 54
- B.** 48
- C.** 24
- D.** 11

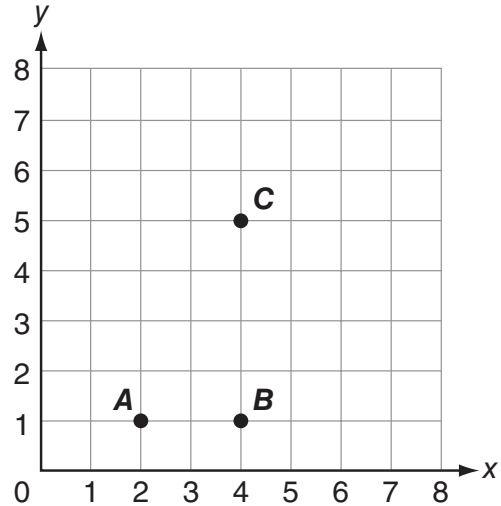
- 14 Sam is helping his aunt lay tile in her bathroom.



The first tile is placed like the one above. The directions say to rotate the next tile 180° to begin the pattern. How will the next tile look after it has been placed?



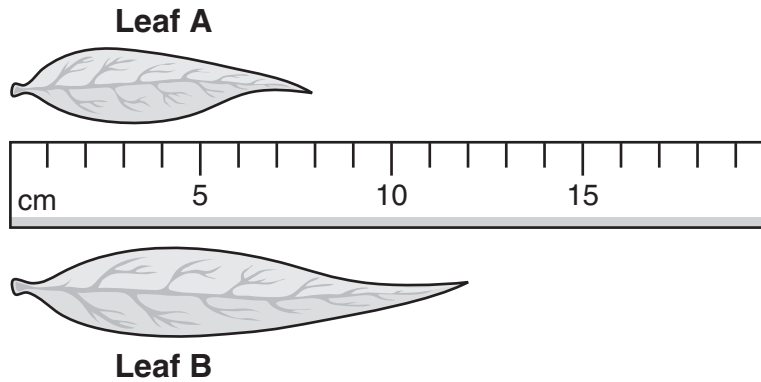
- 15 Namarta wants to set up some goalposts in her backyard so she can practice soccer. She uses the coordinate grid below to plan where to place the posts.



If the 4 posts are to form a rectangle, at which point in the coordinate grid should Namarta put the last goalpost?

- A. (2, 5)
- B. (6, 4)
- C. (4, 2)
- D. (6, 1)

- 16** Dina is measuring these two leaves from the same tree. Leaf B has been growing 1.5 times as long as Leaf A.

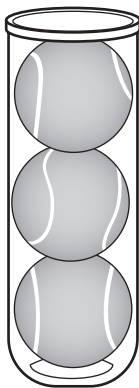


If all the leaves on this tree grow at the same rate, about how long is a leaf that has been growing twice as long as Leaf A?

- A.** 8 cm
- B.** 12 cm
- C.** 16 cm
- D.** 24 cm

Mathematics

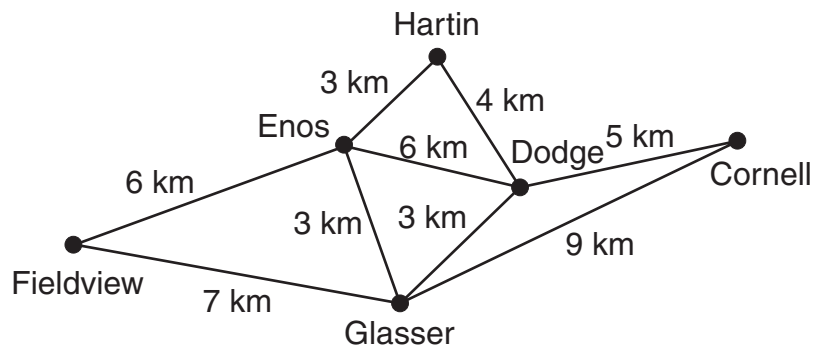
- 17** Bethany is going to play tennis with her friend. She brought a cylinder-shaped can of three tennis balls.



How are the dimensions of the cylinder most likely related to those of the tennis balls?

- A.** The height of the can is 3 times the diameter of one tennis ball.
- B.** The volume of the three tennis balls is equal to the volume of the can.
- C.** The height of the can is equal to three times the radius of one tennis ball.
- D.** The circumference of the opening of the can is equal to the radius of one tennis ball.

- 18 The diagram below shows several cities and the driving distances, in kilometers, between the cities.



The diagram is not drawn to scale.

What is the distance of the shortest route from Fieldview to Cornell?

- A. 14 kilometers
 - B. 15 kilometers
 - C. 16 kilometers
 - D. 17 kilometers
-
- 19 Vanessa is going to order a sundae with 1 scoop of ice cream and 1 topping. There are 6 flavors of ice cream and 3 choices of toppings. How many possible combinations of ice cream and topping does Vanessa have to choose from?
- A. 9
 - B. 12
 - C. 15
 - D. 18

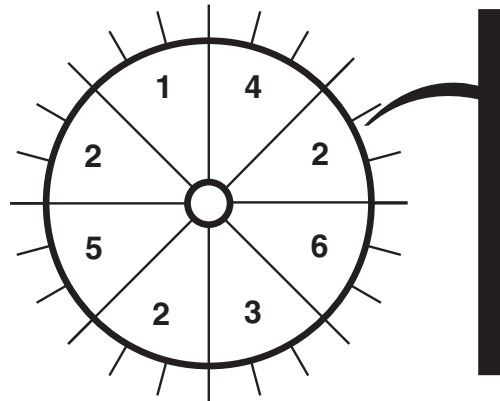
- 20 Look at the table below.

Age in Months	Weight in Pounds
3	13.4
6	17.5
9	20.5
12	22.9

The information in this table shows the average weights for babies at 3, 6, 9, and 12 months old. Which of the following describes the information given in this table applied to a graph?

- A. a vertical line
- B. a decreasing line
- C. a linear function
- D. a nonlinear function

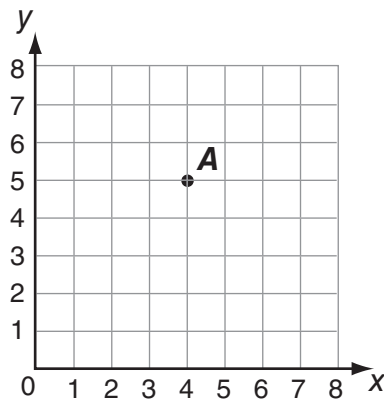
- 21 Ming took out the following spinner from a new board game.



When she spins the spinner, what is the probability that the spinner will stop in a space marked 2?

- A. $\frac{1}{3}$
 - B. $\frac{1}{6}$
 - C. $\frac{2}{5}$
 - D. $\frac{3}{8}$
- 22 Melvin rents a picnic table at a cost of \$11.25 for the first day and \$6.75 for each additional day. Which correctly shows the sequence of rental costs for the first 3 days?
- A. \$0.00, \$11.25, \$18.00
 - B. \$6.75, \$13.50, \$20.25
 - C. \$11.25, \$18.00, \$24.75
 - D. \$11.25, \$22.50, \$33.75

- 23** The coordinate grid below shows Alice’s neighborhood. Point *A* represents Alice’s house. Her friends Barbara, Carlos, and Dana also live in the neighborhood.



Part A

Plot Point *A* on the grid in your answer booklet. Barbara’s house is at the point $(1, 5)$. Plot that point and label it Point *B*. Carlos’ house is at the point $(1, 2)$. Plot that point and label it Point *C*.

Part B

If Alice walks to Barbara’s house and the two girls then walk to Carlos’ house before returning to Alice’s, which type of triangle is formed?

Part C

Point *D* represents Dana’s house. When the four houses are connected by line segments, they form a trapezoid.

Find and label a Point *D* on the grid. Identify the coordinates of the point you labeled as Point *D* and explain why quadrilateral *ABCD* is a trapezoid.

