

## Answer Key for NJ ASK 2007 Grade 5 Mathematics Assessment Samples

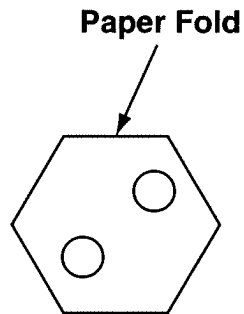
- |       |                     |
|-------|---------------------|
| 1. D  | 13. A               |
| 2. A  | 14. C               |
| 3. B  | 15. A               |
| 4. D  | 16. D               |
| 5. B  | 17. C               |
| 6. C  | 18. B               |
| 7. A  | 19. C               |
| 8. B  | 20. B               |
| 9. A  | 21. A               |
| 10. D | 22. C               |
| 11. B | 23. Please refer to |
| 12. D | rubric below.       |

<b>Mathematics</b>	
<b>Open-Ended Scoring Rubric</b>	
<b>Points</b>	<b>Criteria</b>
<b>3</b>	<p>The student correctly and completely answers both parts of the question and shows supporting work. There may be one computational error. For example:</p> <p><b>Part A.</b> The student may draw a 12-ft x 14-ft patio. Since Mrs. Garza is using 1-ft x 2-ft bricks, the student should determine how many bricks she uses by multiplying <math>6 \times 14 = 84</math> bricks OR by multiplying <math>7 \times 12 = 84</math> bricks.</p> <p><b>Part B.</b> The area is 168 square feet (<math>12 \times 14 = 168</math>), and the perimeter is 52 feet (<math>12 + 12 + 14 + 14 = 52</math>).</p>
<b>2</b>	<p>The student completes both parts of the question and shows supporting work but makes a process error that results in a wrong answer.</p> <p>OR</p> <p>The student correctly answers both parts of the question but does not provide supporting work for one part.</p>
<b>1</b>	<p>The student correctly answers one part of the question and may show little or no supporting work.</p>
<b>0</b>	<p>The response shows insufficient understanding of the problem's essential mathematical concepts. The response is incomplete or inaccurate and contains major errors, or no response is given.</p>

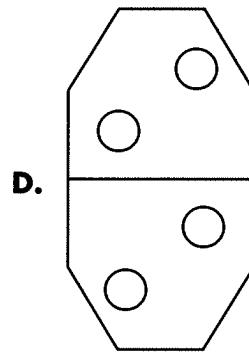
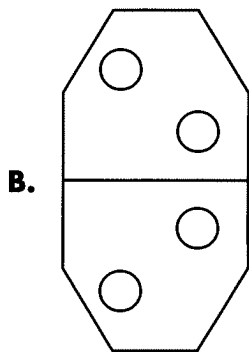
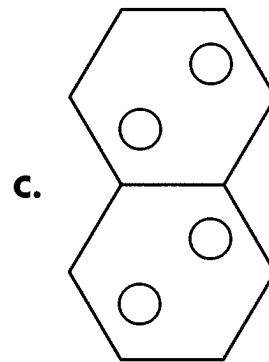
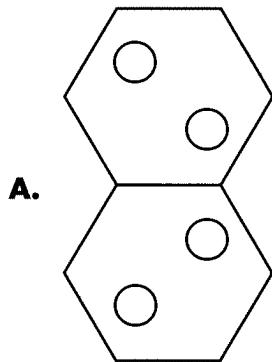
## Mathematics

- 1** Jim sorted 5 wood pieces according to length (shortest to longest). The pieces of wood measured 13.25 inches, 13.3 inches, 13.008 inches, 12.999 inches, and 13.03 inches. In which order did Jim arrange the wood?
- A.** 12.999 in., 13.25 in., 13.3 in.,  
13.008 in., 13.03 in.
- B.** 12.999 in., 13.3 in., 13.008 in.,  
13.25 in., 13.03 in.
- C.** 12.999 in., 13.008 in., 13.25 in.,  
13.03 in., 13.3 in.
- D.** 12.999 in., 13.008 in., 13.03 in.,  
13.25 in., 13.3 in.

- 2 Jennifer is making designs by folding paper and cutting sections of the folded paper. The picture shows the cuts she made.



When she unfolded her paper, what did her design look like?



## Mathematics

- 3** Linda's father is a doctor. He says that the average height of his male patients is 6 feet. How many inches are in 6 feet?
- A.** 68 inches
  - B.** 72 inches
  - C.** 76 inches
  - D.** 84 inches
- 4** The students at Carlos' elementary school want to sell 210 tickets to a school play. They have sold 54 tickets. Carlos wants to write an equation to find how many more tickets,  $t$ , need to be sold. Which equation should Carlos write?
- A.**  $t \times 54 = 210$
  - B.**  $t - 54 = 210$
  - C.**  $54 - t = 210$
  - D.**  $54 + t = 210$
- 5** Olaf and his mother were making pancakes for breakfast. The recipe called for  $3\frac{2}{5}$  cups of flour. Which of the following decimals is equivalent to  $3\frac{2}{5}$ ?
- A.** 3.25
  - B.** 3.4
  - C.** 3.6
  - D.** 3.75

- 6 Marcy does jumping jacks every Monday for 12 Mondays. The chart below shows how many jumping jacks she does on each Monday.

**Marcy's Exercise Chart**

Monday	Number of Jumping Jacks
1	14
2	19
3	25
4	32
5	40
6	49
7	59
12	?

If the pattern continues, how many jumping jacks will Marcy do on the 12th Monday?

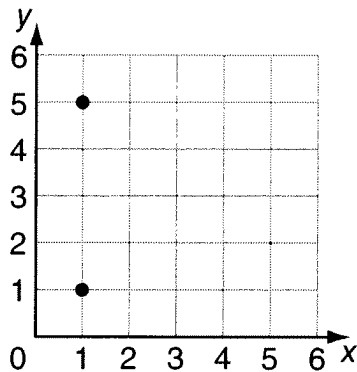
- A.** 76
- B.** 90
- C.** 124
- D.** 150
- 
- 7 Sedrick and James are playing a game with a single pile of 10 cards. The object of the game is to take the last card(s). A player must take at least 1 card on each turn but cannot take more than 3 cards. Sedrick starts. He takes 3 cards. Next, James takes 2 cards. James ends up winning the game. What could be the last two moves?
- A.** Sedrick takes 2; James takes 3.
- B.** Sedrick takes 3; James takes 3.
- C.** Sedrick takes 2; James takes 4.
- D.** Sedrick takes 4; James takes 1.
- 8 Leah's car has a gasoline tank that holds 20 gallons of gas. On Monday, Leah paid \$2.23 per gallon of gas. If gas goes up \$0.11 per gallon, how much more will Leah pay for 20 gallons of gas?
- A.** \$0.11
- B.** \$2.20
- C.** \$2.34
- D.** \$46.80

**Mathematics**

- 9 Nolan's class had a pizza party. Each pizza had 6 slices, and the students in the class ate all the pizza. Of the 24 students in the class, 12 ate 2 slices of pizza and 12 ate 3 slices. Which number sentence would find the total number of pizzas purchased?

- A.  $n = (36 + 24) \div 6$   
B.  $n = (36 + 24) \times 6$   
C.  $n = (3 \times 12) + (2 \times 12)$   
D.  $n = (36 \div 6) \times (24 \div 6)$

- 10 Jessica will graph a right triangle. There are already two points on the graph.



Which could be her third point?

- A. (2, 3)  
B. (1, 3)  
C. (5, 3)  
D. (3, 5)

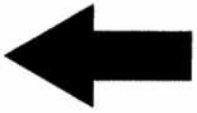
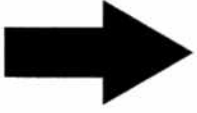
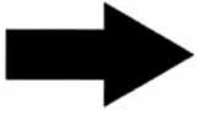
- 11 Malinda collects four-leaf clovers. She wants to collect 100 before winter. She made a table showing how many she collected each week for the first 3 weeks.

**Malinda's Four-Leaf Clovers**

Week	Number of Four-Leaf Clovers
1	31
2	27
3	23

If the pattern shown in the table continues, in which week will she find the 100th four-leaf clover?

- A. Week 3  
B. Week 4  
C. Week 5  
D. Week 6



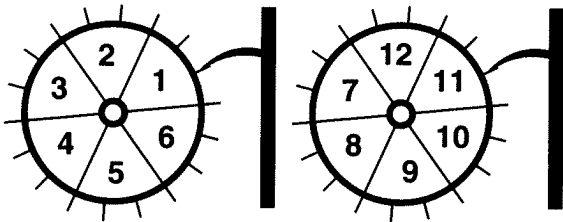
**Mathematics**

- 15** Evan and his family were driving to visit his grandmother. They got on the New Jersey Turnpike at Exit 3. His grandmother lives off Exit 6A. The total charge for the tolls was \$1.70. The expression below shows the tolls for each exit they passed.

$$\$0.45 + x + \$1.00$$

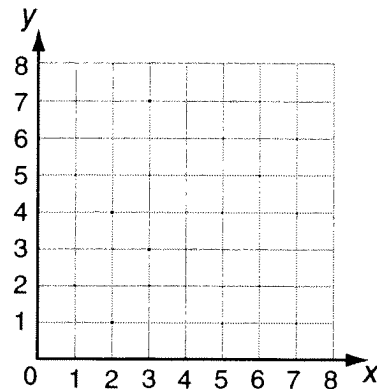
What is the value of  $x$ ?

- A.** \$0.25
  - B.** \$0.55
  - C.** \$1.25
  - D.** \$1.45
- 16** Lawanda is playing a board game. She spins the 2 spinners shown and adds the 2 numbers. As shown below, she spins a sum of 12.



How many different ways can she get the sum of 12 using both spinners?

- 17** Troy wants to graph a rhombus on the coordinate grid shown below.



Which set of ordered pairs should Troy use for the vertices of the rhombus?

- A.** (3, 0), (2, 2), (3, 6), (4, 2)
  - B.** (2, 0), (2, 5), (4, 5), (4, 0)
  - C.** (1, 2), (3, 0), (5, 2), (3, 4)
  - D.** (3, 0), (2, 3), (3, 5), (4, 3)
- 18** There are 12 cans of soda in a cooler; 2 of the cans are cola. If LaTasha pulls 1 can out of the cooler without looking, what is the probability that she will pull out a can of cola?

- A.** 1 in 5
- B.** 1 in 6
- C.** 1 in 10
- D.** 1 in 12

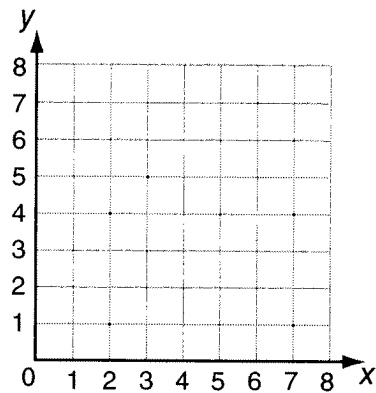
**19** Kyra has \$20. She wants to buy a book that costs  $d$  dollars. Which expression shows how much money Kyra will have left if she buys the book?

- A.  $d - 20$
- B.  $d + 20$
- C.  $20 - d$
- D.  $20 \div d$

**20** On Monday Sergio spent 30 minutes practicing the piano. On Tuesday he spent 20 minutes, and on Wednesday he spent 70 minutes. What is the mean number of minutes he spent practicing on those days?

- A. 30
- B. 40
- C. 50
- D. 60

**21** Cyndi's sister asks what a parallelogram is. Cyndi decides to show her on a grid.

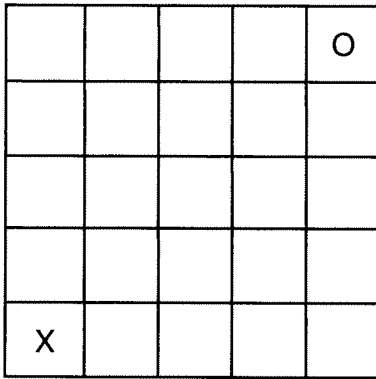


Which of the following coordinates will make the vertices of a parallelogram?

- A.  $(1, 4), (2, 2), (3, 4), (4, 2)$
- B.  $(2, 2), (4, 2), (4, 4), (4, 1)$
- C.  $(1, 2), (2, 4), (3, 4), (4, 2)$
- D.  $(1, 2), (1, 4), (3, 4), (4, 2)$

## Mathematics

- 22** Peter and Jai are playing a game using a board like the one shown below. The objective is to move from the X to the O by making a series of moves. A player can move up 1 or 2 spaces, left or right 2 spaces, or diagonally 2 spaces but cannot make the same move twice in a row.



Which 3 moves can Peter or Jai make to get from the X to the O?

- A.** up 1, right 2, diagonally 2
- B.** right 2, up 2, left 2
- C.** right 2, up 2, diagonally 2
- D.** diagonally 2, right 2, up 1

- 23** Mrs. Ganza is planning to build a new rectangular brick patio. She plans on using bricks that are 1 foot wide by 2 feet long. She would like the new patio to be 12 feet by 14 feet. She expects that no bricks will need to be cut.

**Part A**

Mrs. Ganza uses only whole 1-foot-by-2-foot bricks. State how many bricks should be used. Justify your answer.

**Part B**

Determine the total area and the perimeter of the new patio. Show all your work.



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**Part A**

Mrs. Ganza uses only whole 1-foot-by-2-foot bricks. State how many bricks should be used. Justify your answer.

**Part B**

Determine the total area and the perimeter of the new patio. Show all your work.

## MATHEMATICS

**23.**

**Part A**

*Mrs. Ganza uses 1 x 2 foot size bricks. I counted the number of rows and the number of columns. I have 6 rows and 14 columns. So I can fit in the patio 84 bricks because I multiplied  $6 \times 14$ .*

**Part B**

*The patio is 12 feet by 14 feet so I multiply  $12 \times 14$  to get 168 sq ft of area and add the 4 sides to get perimeter*

$$12 + 12 = 24 \quad \text{and} \quad 14 + 14 = 28$$

$$24 + 28 = 52. \quad \text{I get 52 ft for perimeter.}$$

This is a 3-point response because the student has completed both parts of the problem correctly and shown supporting work. The student has given a clear description to support the number of bricks needed, has correctly determined the perimeter and area, and has provided complete supporting work.

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**Part A**

Mrs. Ganza uses only whole 1-foot-by-2-foot bricks. State how many bricks should be used. Justify your answer.

**Part B**

Determine the total area and the perimeter of the new patio. Show all your work.

## MATHEMATICS

**23.**

**Part A**

*It is a 12 x 14 foot patio. The lady uses 1 x 2 foot size bricks to cover her patio. She uses 84 bricks.*

**Part B**

*The perimeter is 52 ft and area is 168 sq ft*

$$12 + 12 + 14 + 14 = 52$$

This is a 2-point response because the student has correctly completed both parts of the problem but shows little supporting work. The supporting work for the number of bricks is not complete, and the support for the area is missing.

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**Part A**

Mrs. Ganza uses only whole 1-foot-by-2-foot bricks. State how many bricks should be used. Justify your answer.

**Part B**

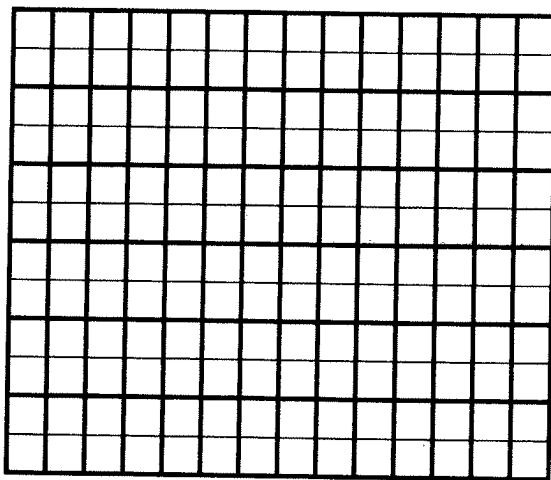
Determine the total area and the perimeter of the new patio. Show all your work.

**MATHEMATICS**

**23.**

**Part A**

*Mrs. Garza wants 12 x 14 patio. She is gonna use bricks that are 1 x 2. She gonna need 84 bricks.*



**Part B**

*Perimeter equals 168.*

This is a 1-point response because the student correctly and completely answers only Part A, with incomplete support. The student gives only the area for Part B, with no supporting work.

- 23** Mrs. Ganza is planning to build a new rectangular brick patio. She plans on using bricks that are 1 foot wide by 2 feet long. She would like the new patio to be 12 feet by 14 feet. She expects that no bricks will need to be cut.

**Part A**

Mrs. Ganza uses only whole 1-foot-by-2-foot bricks. State how many bricks should be used. Justify your answer.

**Part B**

Determine the total area and the perimeter of the new patio. Show all your work.

**MATHEMATICS**

**23.**

**Part A**

*I think the patio is to big to fit in her yard.*

**Part B**

*The perimeter is a square. It has 4 sides like a square.*

This is a 0-point response because the student has not completed any part of the problem correctly. The response shows no understanding of the problem's essential mathematical concepts.