

Print Student Name \_\_\_\_\_

2010–2011



**Reading**  
**Mathematics**  
**Writing**

**GRADE**

**6**

---

**PRACTICE**  
**TEST BOOKLET**  
**WITH ANSWER**  
**KEY**

**DIRECTIONS**

Read each question or problem carefully. Then answer the question or work the problem. This session has 5 multiple-choice questions worth 1 point each and 2 short-answer questions worth 2 points each. For each multiple-choice question, decide which is the best answer. Be sure to mark, write, or draw your answers.

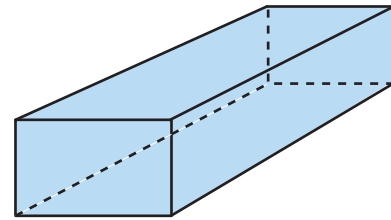
- 1 Xavier has 4 times as many trading cards as Robert. This is modeled by the equation below, where  $x$  represents the number of trading cards Xavier has and  $r$  represents the number of trading cards Robert has.

$$x = 4r$$

If Xavier has 72 trading cards, how many trading cards does Robert have?

- A 288
- B 76
- C 68
- D 18

- 2 Michael has a box that is a rectangular prism, as shown below.



Which of the following statements exactly describes a rectangular prism?

- A It has 8 faces, 8 edges, and 6 vertices.
- B It has 8 faces, 10 edges, and 8 vertices.
- C It has 6 faces, 10 edges, and 6 vertices.
- D It has 6 faces, 12 edges, and 8 vertices.

- 3 The school choir is having 48 vests made for an upcoming event. Each vest requires  $1\frac{5}{8}$  yards of material.

What is the total number of yards of material required to make 48 vests?

- A 78 yd
  - B 84 yd
  - C 90 yd
  - D 240 yd
- 4 Which of the geometric figures named below has exactly 1 vertex?

- A Cone
- B Cube
- C Cylinder
- D Sphere

- 5 Mr. Frasier placed 20 cards of the same size into an empty box. Each card has the name of a different student in his class. Each day he randomly selects 1 name card from the box to determine who will be the daily leader.

- There are 10 girls and 10 boys in the class.
- The name cards of 9 girls and 3 boys have already been selected and were not put back into the box.

What is the probability that the next name card Mr. Frasier selects is a boy's?

- A  $\frac{1}{2}$
- B  $\frac{1}{8}$
- C  $\frac{7}{8}$
- D  $\frac{7}{20}$

- 6 Margaret claims that all rectangles are squares. Bradley claims that all squares are rectangles.

Use words, numbers, or pictures to explain whether Margaret's or Bradley's claim is correct.

- 7 Chan made a batch of trail mix. The table below shows the amount of each ingredient.

Trail Mix

Ingredient	Amount (cups)
Raisins	$1\frac{2}{5}$
Almonds	$2\frac{5}{8}$
Pretzels	$2\frac{2}{3}$
Cheese crackers	$3\frac{1}{4}$

- A. Which ingredient, almonds or pretzels, has a greater amount in the trail mix? Use words, numbers, or pictures to explain your answer.
- B. If each amount is rounded to the nearest whole number, what is the estimate for the total number of cups of ingredients used? Use words, numbers, or pictures to explain your answer.

**DIRECTIONS**

Read each question or problem carefully. Then answer the question or work the problem. This session has 5 multiple-choice questions worth 1 point each, 2 short-answer questions worth 2 points each, and 1 open-ended question worth 4 points. For each multiple-choice question, decide which is the best answer. Be sure to mark, write, or draw your answers.

- 8 Nick wants to determine the amount of time sixth-grade students spend studying for their math exam.

Which sampling method would be most unbiased?

- A Survey the 15 girls in his class
- B Survey 60 sixth-grade students
- C Survey his 3 best friends
- D Survey the 13 boys in his class

- 9 A certain flower arrangement costs \$20 plus \$4 for each rose added to the arrangement.

Which equation can be used to calculate the total cost,  $c$ , for an arrangement that has  $n$  roses?

- A  $n = 4 + 20c$
- B  $c = 4 + 20n$
- C  $n = 20 + 4c$
- D  $c = 20 + 4n$

- 10 Aaron wants to compare the heights of the players on the school's basketball team.

Which graph would be the most appropriate for comparing the heights of these players?

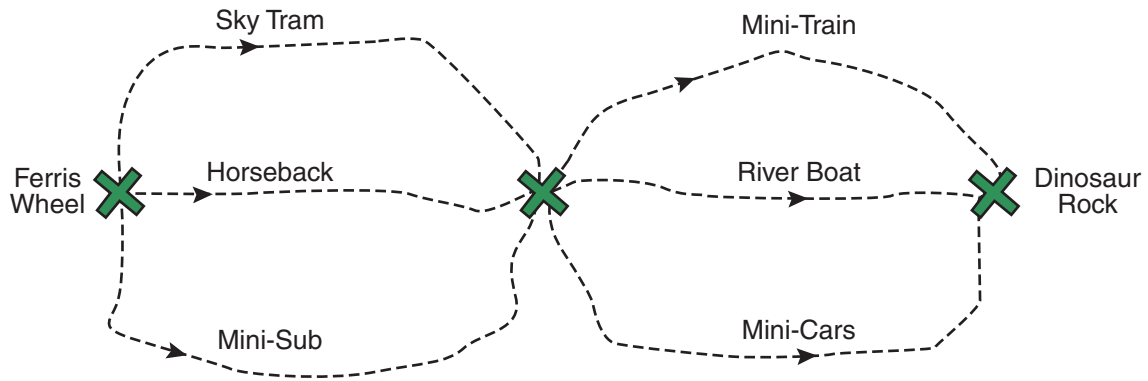
- A Bar graph
- B Circle graph
- C Line graph
- D Picture graph

- 11 Rochelle earned \$500 during the summer. She put 35% of this amount into savings.

Which of the following fractions is equivalent to 35%?

- A  $\frac{1}{4}$
- B  $\frac{7}{20}$
- C  $\frac{1}{35}$
- D  $\frac{7}{100}$

- 12 The following diagram shows the different transportation methods Edward can use to get from the Ferris Wheel to Dinosaur Rock. One route he could take is the Mini-Sub and River Boat.



What is the total number of possible routes Edward can take from the Ferris Wheel to Dinosaur Rock using only two transportation methods?

- A 6
- B 9
- C 12
- D 15

- 13 A fair coin was tossed 10 times, and the outcomes of heads (H) or tails (T) were recorded in the table below.

Coin Toss Results

Toss	1	2	3	4	5	6	7	8	9	10
Outcome	H	H	T	H	T	T	H	H	H	T

- A. Based on the information in the table, what was the experimental probability that the coin landed “heads up”? Use words, numbers, or pictures to explain your answer.
- B. What is the theoretical probability that the coin will land “heads up” on each toss? Use words, numbers, or pictures to explain your answer.

- 14 Jonah wants to have hardwood flooring installed in his closet. The floor of his closet is shaped like a rectangle, as shown below.



It will cost Jonah \$2.75 per square foot to have the flooring installed. At that rate, what will be the total cost to install the flooring? Use words, numbers, or pictures to explain your answer.



15 The girls' and boys' basketball teams at Nigel's school each play a total of 24 regular season games.

- The girls have won 4 out of the first 6 games.
- The boys have won 5 out of the first 8 games.

- A. What percent of their games have the boys won? Use words, numbers, or pictures to explain your answer.
- B. If the girls continue to win at the same rate, how many games would they win in the 24-game season? Use words, numbers, or pictures to explain your answer.
- C. Nigel, who is a member of the boys' basketball team, claims the boys will win more games than the girls if both teams continue to win at the same rate. Use words, numbers, or pictures to explain whether you agree or disagree with Nigel's claim.

**GRADE 6 MATHEMATICS PRACTICE TEST ANSWER KEY**

Question Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>Strand<sup>1</sup></b>	A	G	N	G	D	G	N	D	A	D	N	D	D	M	A
<b>Benchmark</b>	A2	G4	N3	G1	D4	G4	N3	D2	A3	D2	N1	D3	D4	M1	A1
<b>Performance Standard</b>	4	1	7	3	6	1	1	7	1	1	2	3	3	3	4
<b>Depth of Knowledge</b>	2	1	2	1	2	3	2	2	2	2	1	2	2	2	3
<b>Item Type<sup>2</sup></b>	MC	MC	MC	MC	MC	SA	SA	MC	MC	MC	MC	MC	SA	SA	OE
<b>Answer Key</b>	D	D	A	A	C			B	D	A	B	B			
<b>Total Possible Points</b>	1	1	1	1	1	2	2	1	1	1	1	1	2	2	4

<sup>1</sup>Strand: N = Numbers and Operations, D = Data Analysis and Probability, G = Geometry, M = Measurement, A = Algebra

<sup>2</sup>Item Type: MC = Multiple Choice, SA = Short Answer, OE = Open Ended