

7P1

# Alaska

Comprehensive System of Student Assessment

Standards Based Assessments

Grade 7

Reading ★ Writing ★ Mathematics

Practice Test Book



Spring 2007

Alaska Department of Education & Early Development

Name:

## MATHEMATICS PRACTICE TEST

You may use the Mathematics Reference Sheet any time during the test.

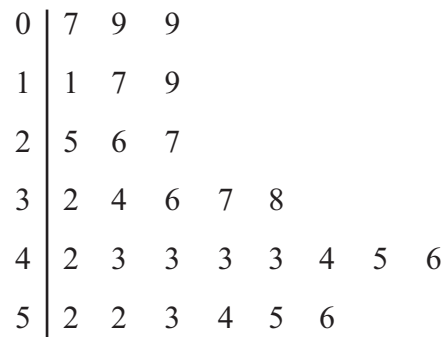
1. Cindy is painting a rectangular prism. The width is 6 inches, the height is 5 inches, and the length is 7 inches. What is the surface area of the rectangular prism?
    - A 107 square inches
    - B 154 square inches
    - C 210 square inches
    - D 214 square inches
- 
2. Haley had 20 different-colored rubber ducks. She had 12 yellow ducks, 3 black ducks, and 5 orange ducks. She picked 1 duck without looking. What is the probability Haley picked a yellow duck?
    - A  $\frac{1}{20}$
    - B  $\frac{1}{3}$
    - C  $\frac{2}{5}$
    - D  $\frac{3}{5}$

## MATHEMATICS PRACTICE TEST

3. Kate bought a bag of grapes that was 3.2 pounds. The bag of grapes cost \$6.24. What was the price per pound for the bag of grapes?
- A \$1.90
  - B \$1.95
  - C \$2.00
  - D \$2.08
- 
4. Victor wants to expand his rectangular-shaped garage. The garage is 7 feet wide and 15 feet long. He plans to double the width and make no changes to the length. How does doubling the width affect the area of the garage?
- A The area doubles.
  - B The area is 4 times more.
  - C The area increases by 7 feet.
  - D The area increases by 14 feet.

## MATHEMATICS PRACTICE TEST

5. The stem-and-leaf plot below shows the high temperatures for 1 month.



**Key**

$$1 | 2 = 12$$

What does the third line of the data represent?

- A  $5^{\circ}$ ,  $6^{\circ}$ , and  $7^{\circ}$  are the high temperatures for week 2 of the month.
- B The high temperatures of  $2^{\circ}$ ,  $5^{\circ}$ ,  $6^{\circ}$ , and  $7^{\circ}$  occurred this month.
- C The high temperatures of  $25^{\circ}$ ,  $26^{\circ}$ , and  $27^{\circ}$  occurred this month.
- D  $5^{\circ}$ ,  $6^{\circ}$ , and  $7^{\circ}$  are the high temperatures that occurred twice in the month.

**Turn to page 23 in your practice test answer booklet to complete question 6.**

## MATHEMATICS PRACTICE TEST

7. There are 100 students who eat lunch. Of these, 80 students drink milk. Which shows the fraction of students at lunch who drink milk?

A  $\frac{1}{5}$

B  $\frac{1}{4}$

C  $\frac{4}{5}$

D  $\frac{5}{4}$

- 
8. Sheila's flight from Los Angeles to New York departs at 8:12 AM. The flight will take 5 hours. The time in New York is 3 hours later than the time in Los Angeles. What time will it be in New York when Sheila's airplane lands?

A 11:12 AM

B 1:12 PM

C 3:12 PM

D 4:12 PM

## MATHEMATICS PRACTICE TEST

9. There are 48 boys in the seventh grade. There are 2 boys for every 1 girl in the seventh grade. How many girls are in the seventh grade?

A 24  
B 46  
C 72  
D 96

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10. What is the value of  $8x + 2y$  when  $x = 5$  and  $y = 9$ ?

A 24  
B 58  
C 61  
D 82

## MATHEMATICS PRACTICE TEST

11. Jarrett's homework assignment is to draw a floor plan of his rectangular bedroom to scale. His bedroom is 10 feet wide and 14 feet long. The scale factor from Jarrett's drawing to his bedroom is 1 inch = 2 feet. What is the length of Jarrett's bedroom in the floor plan?
- A 7 inches
  - B 12 inches
  - C 16 inches
  - D 28 inches

**Turn to page 25 in your practice test answer booklet to complete question 12.**

## MATHEMATICS PRACTICE TEST

13. The sizes of bolts in Tracy's toolbox are listed below.

$$\frac{3}{4}, \frac{3}{16}, \frac{1}{2}, \frac{5}{8}, \frac{9}{16}$$

Which is the order of the bolts from least to greatest?

A  $\frac{1}{2}, \frac{3}{4}, \frac{3}{16}, \frac{5}{8}, \frac{9}{16}$

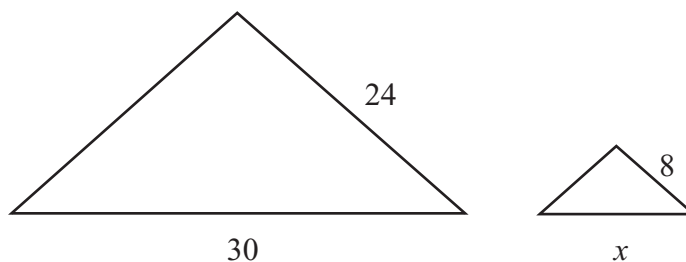
B  $\frac{3}{16}, \frac{1}{2}, \frac{3}{4}, \frac{5}{8}, \frac{9}{16}$

C  $\frac{3}{16}, \frac{1}{2}, \frac{9}{16}, \frac{5}{8}, \frac{3}{4}$

D  $\frac{1}{2}, \frac{3}{4}, \frac{5}{8}, \frac{3}{16}, \frac{9}{16}$

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14. The triangles shown below are similar.



The scale factor from the large triangle to the small triangle is 3:1. What is the length of side  $x$  of the smaller triangle?

A 10

B 14

C 72

D 90



## MATHEMATICS PRACTICE TEST

15. Tom has 12 quarters. He has 3 times as many quarters as he has dimes. Which equation can be used to calculate the number dimes ( $d$ ) Tom has?

A  $3d = 12$

B  $\frac{d}{3} = 12$

C  $d + 3 = 12$

D  $d - 3 = 12$

- 
16. A 3-dimensional solid was built with 1 square base and 4 triangular-shaped sides. Which geometric shape was the solid?

A square prism

B square pyramid

C triangular prism

D triangular pyramid

## MATHEMATICS PRACTICE TEST

17. Jesse needs to find the area of the floor in her classroom. Which unit of measure is best for finding the area of the floor in her classroom?
- A square millimeters
  - B square centimeters
  - C square meters
  - D square kilometers

**Turn to page 27 in your practice test answer booklet to complete question 18.**

## MATHEMATICS PRACTICE TEST

19. Which is a prime number?

- A 15
  - B 17
  - C 21
  - D 39
- 

20. Tammy wants to decorate the outside of a circular mirror with a ribbon. The radius of the mirror is 12 inches. Which expression represents the circumference of the mirror in inches?

- A  $6\pi$
  - B  $12\pi$
  - C  $24\pi$
  - D  $144\pi$
- 

21. A model of a statue is 10 inches tall. The scale factor of the model to the actual statue is  $\frac{5}{2}$  inches = 8 feet. How tall is the actual statue?

- A 16 feet
- B 32 feet
- C 80 feet
- D 200 feet

# MATHEMATICS PRACTICE TEST

22. A scientist measured the thickness ( $t$ ) of the ice on a lake each week ( $n$ ) during a thaw. The equation below represents her findings.

$$t = 38 - 3n$$

Which table shows the thickness ( $t$ ) of the ice each week ( $n$ ) for the first 4 weeks?

A

**Ice Thickness**

Number of Weeks ( $n$ )	Thickness of Ice ( $t$ ) (inches)
1	34
2	33
3	32
4	31

B

**Ice Thickness**

Number of Weeks ( $n$ )	Thickness of Ice ( $t$ ) (inches)
1	38
2	35
3	32
4	29

C

**Ice Thickness**

Number of Weeks ( $n$ )	Thickness of Ice ( $t$ ) (inches)
1	35
2	70
3	105
4	140

D

**Ice Thickness**

Number of Weeks ( $n$ )	Thickness of Ice ( $t$ ) (inches)
1	35
2	32
3	29
4	26

## MATHEMATICS PRACTICE TEST

23. The table below shows the heights of 6 basketball players at Ling Middle School.

**Heights of Basketball Players**

Name	Height (cm)
Ann	130
Hank	162
Fiona	140
Steve	178
Travis	130
Lexi	142

What is the median of the heights?

- A 130 cm
- B 141 cm
- C 147 cm
- D 159 cm

- 
24. The area of the front cover of a book is 300 square centimeters. What is the area in square meters?

- A 0.003
- B 0.03
- C 0.3
- D 3

## MATHEMATICS PRACTICE TEST

25. In Asad's class,  $\frac{4}{5}$  of the students like cake. Of those,  $\frac{2}{3}$  like chocolate cake. What fraction of Asad's class likes chocolate cake?

- A less than  $\frac{2}{3}$
- B exactly  $\frac{2}{3}$
- C between  $\frac{2}{3}$  and  $\frac{4}{5}$
- D more than  $\frac{4}{5}$

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26. The table below shows the relationship between the amount of line used and the depth of a fishing lure.

**Fishing Lines and Lures**

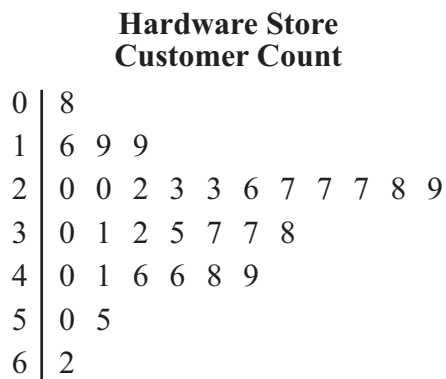
Amount of Line Used (feet)	Depth of Lure (feet)
20	4
40	8
60	12
80	16

The pattern in the table continues. Sally used 200 feet of line. What was the depth of the lure for 200 feet of line?

- A 20 feet
- B 36 feet
- C 40 feet
- D 44 feet

## MATHEMATICS PRACTICE TEST

27. The following stem-and-leaf plot shows the ages of people entering a hardware store.



<b>Key</b> $2   5 = 25$
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How many people were over the age of 39?

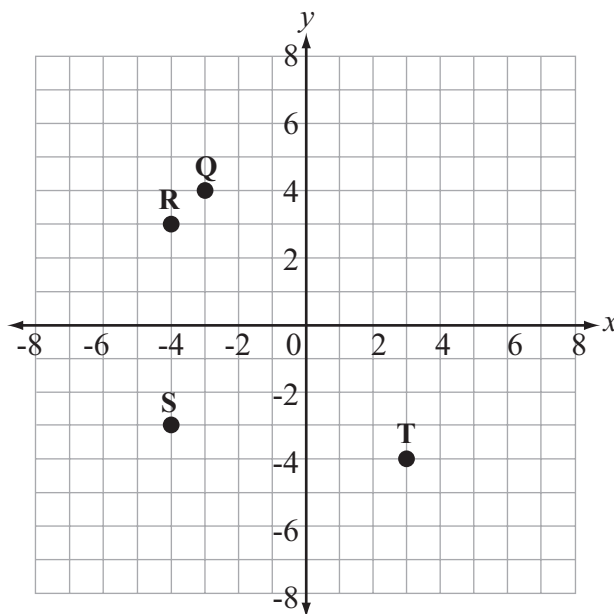
- A 7
- B 8
- C 9
- D 12

- 
28. Dan has a fish tank that is in the shape of a cube. Each side is 10 inches long. What is the tank's volume?

- A 30 cubic inches
- B 300 cubic inches
- C 600 cubic inches
- D 1,000 cubic inches

## MATHEMATICS PRACTICE TEST

29. Aleta was completing a puzzle picture by connecting ordered pairs of points. Her next point is  $(-4, 3)$ .



Which point is located at  $(-4, 3)$ ?

- A Q
- B R
- C S
- D T



## MATHEMATICS PRACTICE TEST

30. Pat went to the store and bought items that cost the prices shown below.

\$12.34, \$38.45, \$40.24, \$84.10, \$96.99

About how much should Pat's bill be to the nearest \$10?

- A \$250.00
  - B \$260.00
  - C \$270.00
  - D \$300.00
- 

31. Russ stacked 2 blocks on top of each other. The height of the first block was  $4\frac{1}{3}$  inches. The height of the second block was  $8\frac{3}{5}$  inches. What was the height of the stack of 2 blocks?

- A 12 inches
- B  $12\frac{3}{15}$  inches
- C  $12\frac{4}{8}$  inches
- D  $12\frac{14}{15}$  inches

**END SESSION**

