MATHEMATICS

GRADE LEVEL

SAMPLE TEST

2003-2005

GRADE

6

Calculation and Estimation

Measurement

Statistics and Probability

Algebraic Relationships

Geometry

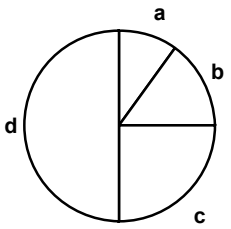
OFFICE OF
ASSESSMENT & EVALUATION
THE OREGON DEPARTMENT OF EDUCATION

DIRECTIONS

Read each of the questions below and then decide on the BEST answer. There are a lot of different kinds of questions, so read each question carefully before marking an answer on your answer sheet.

1

Which region represents 25% of the circle?



A. a B. b C. c D. d

2

Debbie bought 3 bags of potato chips at $3.19 each. How much change will she get back from a $20.00 bill?

A. $ 3.19
B. $ 9.57
C. $10.43
D. $16.81

3

Using a numbered cube with digits 1-6 on its faces, what is the probability of rolling a 4?

A. $\frac{4}{6}$
B. $\frac{2}{3}$
C. $\frac{1}{3}$
D. $\frac{1}{6}$

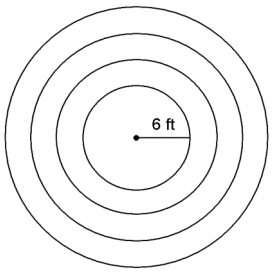
4

At the beginning of the school year, Juan could do 35 sit-ups in one minute. By June, he increased that number by "y" sit-ups. In June he could do _____ sit-ups.

A. 35 + y
B. 35 – y
C. 35 ÷ y
D. 35y

5

Cris's family took a trip to visit the new local gardens. While there they saw an unusual circular design created from different stones found around the state. The drawing shown illustrates the design. There is 3 feet between each ring of stones. What is the diameter of the entire circular design?



A. 15 feet
B. 21 feet
C. 27 feet
D. 30 feet

6

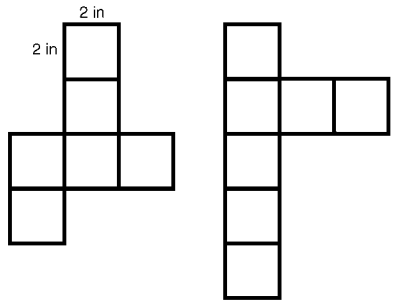
There are 90 calories in six ounces of juice. How many calories are there in eight ounces of juice?

A. 110 calories
B. 120 calories
C. 130 calories
D. 140 calories

Mathematics ▼

7

The figures below are each made of 2-inch squares. What are their perimeters?



A. 6 inches and 7 inches
B. 14 inches and 28 inches
C. 28 inches and 32 inches
D. Both are 28 inches.

8

The chart is a listing of western states and maximum speeds allowed on rural interstates. Determine the mode of the speeds listed.

Alaska	65 mph
Arizona	75 mph
California	70 mph
Idaho	75 mph
Montana	75 mph
Nevada	75 mph
Oregon	65 mph
Washington	70 mph

A. 65 mph
B. 71.25 mph
C. 72.50 mph
D. 75 mph

9

What rule best describes this pattern?

48, 24, 12, 6

A. Each number decreases by 24 to get the next number.
B. Each number is divided by 2 to get the next number.
C. Each number is increased by 6 to get the next number.
D. Each number is doubled to get the next number.

10

A four-sided figure measures four feet on one length, five feet on the opposite length, and three feet on each connecting length. This figure could be a _____.

A. rectangle
B. square
C. rectangular solid
D. trapezoid

11

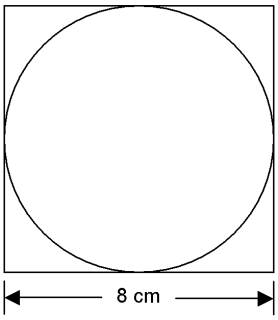
Put these fractions in order from least to greatest.

$$\frac{2}{3} \quad \frac{3}{4} \quad \frac{1}{2} \quad \frac{2}{6} \quad \frac{1}{8}$$

A. $\frac{1}{8}, \frac{2}{6}, \frac{1}{2}, \frac{2}{3}, \frac{3}{4}$
B. $\frac{1}{2}, \frac{1}{8}, \frac{2}{3}, \frac{2}{6}, \frac{3}{4}$
C. $\frac{1}{2}, \frac{2}{3}, \frac{3}{4}, \frac{2}{6}, \frac{1}{8}$
D. $\frac{1}{8}, \frac{2}{6}, \frac{1}{2}, \frac{3}{4}, \frac{2}{3}$

12

In the figure, each side of the square measures 8 cm. What is the approximate circumference of the circle?



A. 12.56 cm
B. 25.12 cm
C. 50.24 cm
D. 200.96 cm

13

How much more is the average price of a giant pizza than a medium pizza?

	Medium	Giant
Cheese	$ 7.00	$10.00
Pepperoni	$ 9.00	$13.00
Hawaiian	$11.00	$14.00
Vegetarian	$12.00	$16.00

A. $3.50
B. $3.75
C. $4.00
D. $8.00

14

Find the next two numbers for this arithmetic sequence:

10, - 4, - 18, - 32, __, __

A. - 38, - 44
B. - 44, - 52
C. - 46, - 60
D. - 52, - 68

15

This figure is most often called _____.

A. a trapezoid
B. a parallelogram
C. a rectangle
D. a rhombus

16

The distance from the Earth to the sun is 9.296×10^7 miles. The distance written in standard form is:

A. 92,960 miles
B. 9,296,000 miles
C. 92,960,000 miles
D. 92,960,000,000 miles

Mathematics ▼

17

Mari planted a vegetable garden in June that was 4 feet by 6 feet. In July she planted a second garden that was 3 feet by 7 feet. What will the **total** square feet of garden space be?

A. 40 square feet

B. 41 square feet

C. 45 square feet

D. 49 square feet

18

Out of 36 students, four students are named Pat. Each of the students puts his or her name on an index card. If a card is drawn at random, what is the probability it will say "Pat"?

A. $\frac{1}{36}$

B. $\frac{1}{12}$

C. $\frac{1}{9}$

D. $\frac{1}{4}$

19

Mari's allowance increases by $1.00 each week. She receives $4.00 the first week. How much money will she receive on the fourth week?

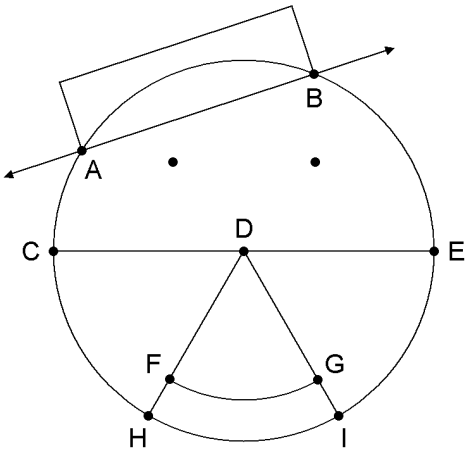
A. $6.00

B. $7.00

C. $8.00

D. $9.00

20



Study the picture of "Mr. Circle the Clown." Given the following lengths, what would be the length of segment CE?

Segment GI = 10 millimeters
Segment DG = 30 millimeters

A. 30 millimeters

B. 40 millimeters

C. 60 millimeters

D. 80 millimeters

21

The state fair was in town, and everyone was excited. The carnival games were the most popular attractions. The first day the fair was open, 2 people won stuffed animals. The second day 4 people won, the third day 6 people won, and so on.
If the fair was open for "n" days, how many people would win on the nth day, if this pattern continued?

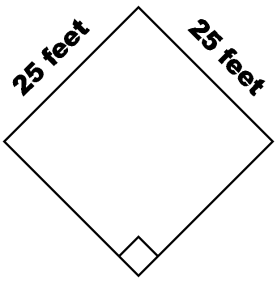
A. $2 + n$

B. $2n$

C. $\frac{n}{2}$

D. $\frac{2}{n}$

22

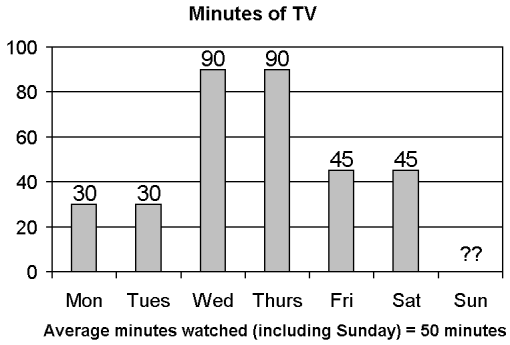


The Spiders' baseball team needs to buy grass for the inside of their square field. If one side of the field is 25 feet long, how many square feet of grass should they buy?

A. 50 square feet
B. 100 square feet
C. 175 square feet
D. 625 square feet

23

Luis watches TV everyday. He watches 30 minutes on Monday and Tuesday, 90 minutes on Wednesday and Thursday, and 45 minutes on Friday and Saturday.



The mean amount of time that Luis watches TV every day is 50 minutes. How much time does Luis watch TV on Sunday?

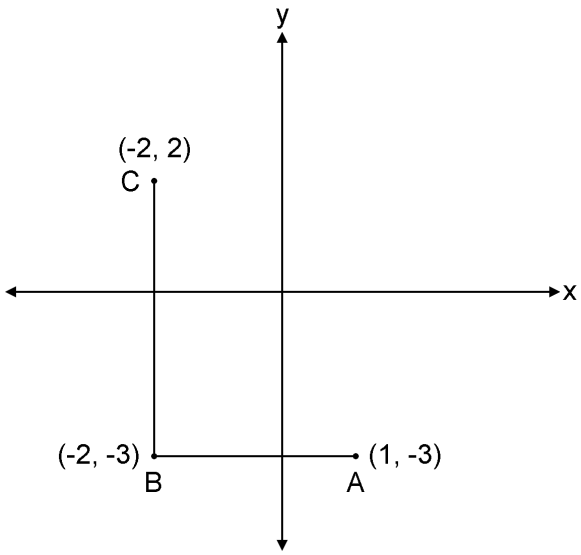
A. 20 minutes
B. 30 minutes
C. 45 minutes
D. 50 minutes

24

Twice a number (z) added to 21 is equal to 9 times the number added to 7. What is the number?

A. z = - 4
B. z = - 2
C. z = 2
D. z = 4

25



What is the total distance from point A to point C if you travel along the line segments through point B?

A. 2 units
B. 5 units
C. 8 units
D. 13 units

GRADE 6 MATHEMATICS SAMPLE TEST KEY 2003 – 2005

Test Item	Correct Answer	Score Reporting Category
1	C	Calculations and Estimations
2	C	Measurement
3	D	Statistics and Probability
4	A	Algebraic Relationships
5	D	Geometry
6	B	Calculations and Estimations
7	C	Measurement
8	D	Statistics and Probability
9	B	Algebraic Relationships
10	D	Geometry
11	A	Calculations and Estimations
12	B	Measurement
13	A	Statistics and Probability
14	C	Algebraic Relationships
15	B	Geometry
16	C	Calculations and Estimations
17	C	Measurement
18	C	Statistics and Probability
19	B	Algebraic Relationships
20	D	Geometry
21	B	Algebraic Relationships
22	D	Measurement
23	A	Statistics and Probability
24	C	Algebraic Relationships
25	C	Geometry

CONVERTING TO A RIT SCORE

Number Correct	RIT score	Number Correct	RIT score
1	187.4	14	224.3
2	194.9	15	226.2
3	199.7	16	228.1
4	203.2	17	230.1
5	206.2	18	232.2
6	208.7	19	234.4
7	211.0	20	236.9
8	213.1	21	239.9
9	215.1	22	243.4
10	217.1	23	248.1
11	218.9	24	255.6
12	220.7	25	262.8
13	222.5		

Note: The sample test is for practice only; scores may not be substituted for the Oregon Statewide Assessment.