SAMPLE TEST

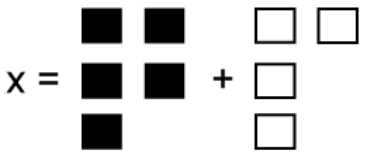
MATHEMATICS

2007 Oregon Content Standards
Grades 3 - 8

OFFICE OF
ASSESSMENT & INFORMATION SERVICES
THE OREGON DEPARTMENT OF EDUCATION

2010-2013 Mathematics Sample Test – Grade 7

1. If ■ equals 1 and □ equals −1, what is the value of x?



A. -9
B. -1
C. 1
D. 9

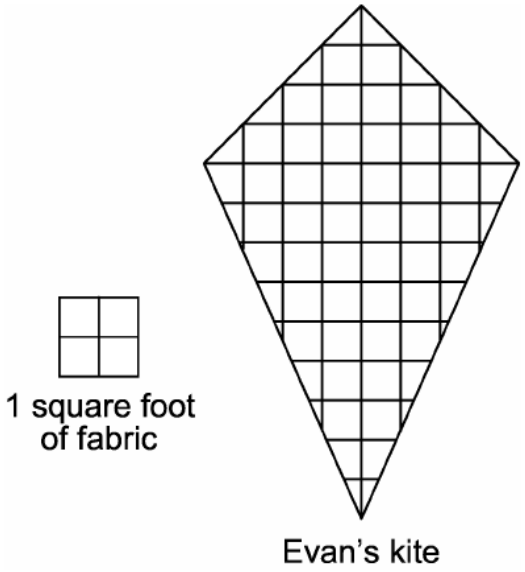
2. There are 90 calories in six ounces of juice.
How many calories are there in eight ounces of juice?

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

3. A group of ten people is going to play ball this weekend. Four will play basketball; half as many will play baseball, and the rest will play soccer.
How many people will play soccer?

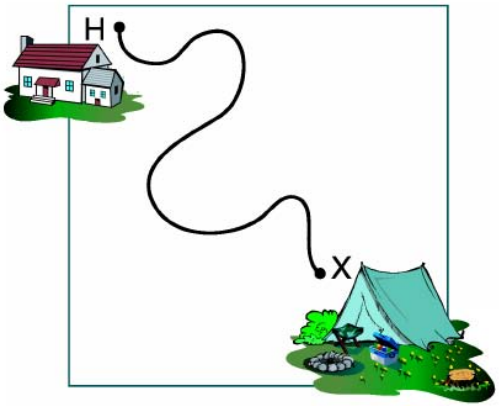
A. 2
B. 4
C. 6
D. 8

4. Evan is making a kite. Approximately how many square feet of fabric is the kite?



A. Between 5 and 6
B. Between 11 and 14
C. Between 21 and 24
D. Between 45 and 46

5. Randy wants to use the map shown to get from his house, H, to his campsite, X. He knows it is around 40 miles, but wants to measure it more precisely. Which scale does the map most likely show?



A. one inch = 0.1 miles
B. one inch = 1 mile
C. one inch = 10 miles
D. one inch = 100 miles

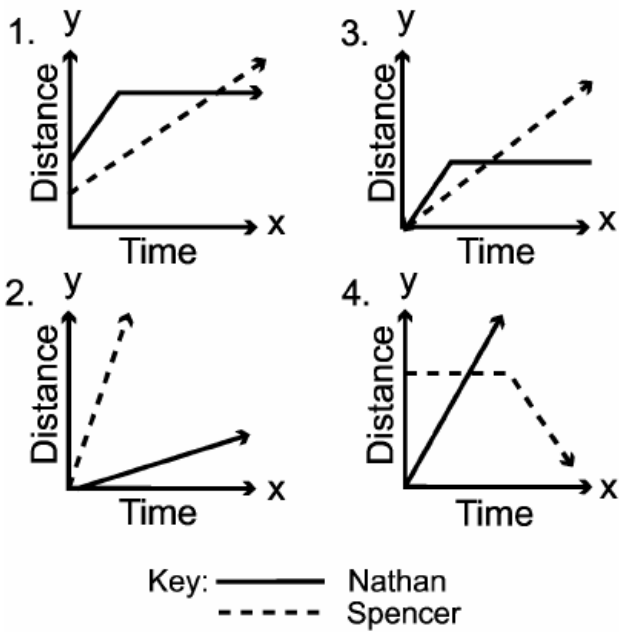
6. Find the circumference of a circle that has a diameter of 15 mm.

   A. 23.55 mm
   B. 47.10 mm
   C. 94.20 mm
   D. 176.63 mm

7. Mrs. Brown gave her class the following mental math problem: Find the product of -8 and -7, multiply your answer by 5, then divide you result by -5.
   What is the final number?

   A. -56
   B. 56
   C. -280
   D. 280

8. Nathan and Spencer are in a race. They begin the race at the same time from the same place. Part way through the race Nathan falls and does not finish the race.
   Choose the graph that best describes what happened.



   A. 1
   B. 2
   C. 3
   D. 4

9. Solve the following equation.

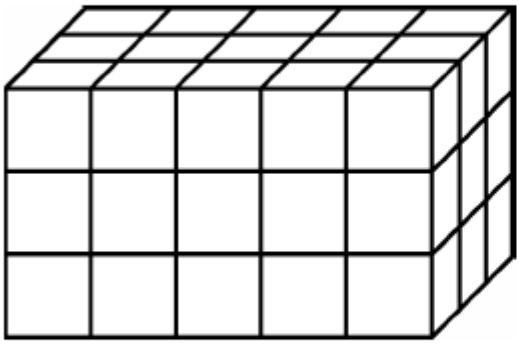
$$(2x + 1) - 4 = 136$$

A. $x = 67.5$
B. $x = 69.5$
C. $x = 70$
D. $x = 137$

10. Matt has 4 deciliters of milk.
Will the milk fill a 1-liter bottle?

A. Yes, it equals 40 liters.
B. Yes, it equals 4 liters.
C. No, it equals 0.4 liters.
D. No, it equals 0.04 liters.

11. Tanisha built a rectangular prism out of 1-inch blocks.
How many blocks did she use to build this figure?



A. 15
B. 39
C. 45
D. 78

12. A stereo store has a 25% off sale. Allen wants to find out how much a $300 stereo would cost.
Which strategy could Allen use?

A. $300 - 25$

B. $300 - (300 \times \frac{1}{4})$

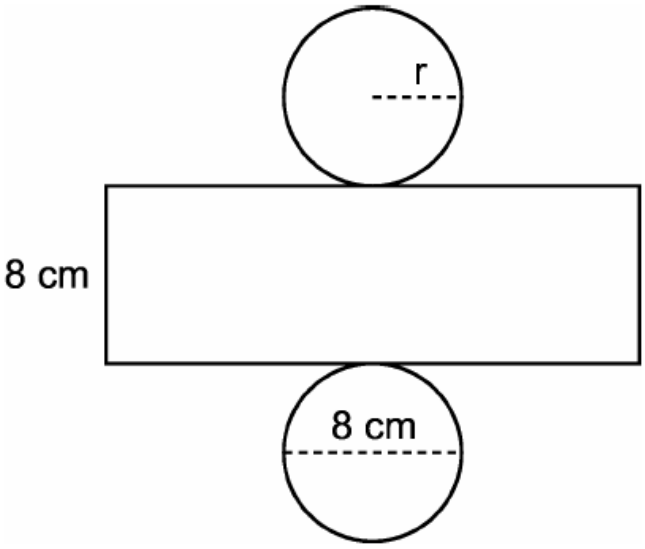
C. $300 \times \frac{1}{4}$

D. $300 - (300 - 25)$

13. A gumball machine contains 24 red, 60 blue, and 48 white gumballs.
What is the probability that the next gumball sold will be white?

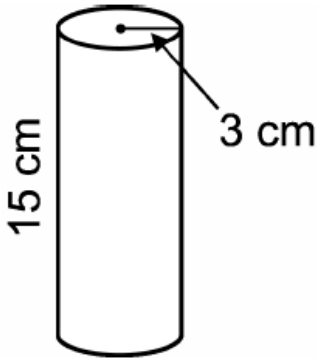
A. 4 chances in 11
B. 1 chance in 2
C. 4 chances in 5
D. 4 chances in 7

14. Find the total surface area of the cylinder in square cm.
(Use 3.14 for π)



A. 200.96
B. 301.44
C. 602.88
D. 803.84

15. What is the approximate volume of the glass?



A. 1695 cm^3
B. 424 cm^3
C. 283 cm^3
D. 141 cm^3

16. Students were asked to explain the first step in solving the equation: $3y + 4 = 16$. Four students volunteered their answer. Susan says, "multiply by 3." Ted says, "add 4 to both sides." Greg says, "subtract 4 from both sides." Tonya says, "add 16 to both sides."
Who is correct?

A. Susan
B. Ted
C. Greg
D. Tonya

17. A television screen with a 12-inch diagonal has a height of 9 inches.
What is the diagonal of a similar television screen with a height of 24 inches?

A. 12 inches
B. 18 inches
C. 24 inches
D. 32 inches

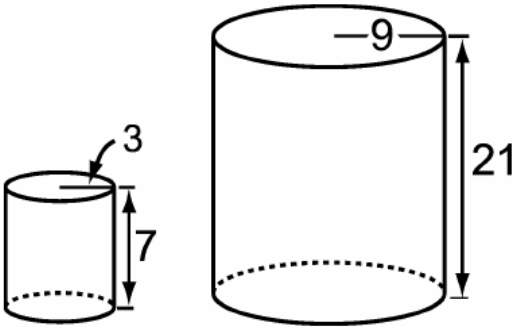
18. Shawn and Mark want to save $225.00 together. Shawn has $16.00 and saves $10.00 each week. Mark has $22.00 and saves $7.00 each week.
Which equation can be used to find the number of weeks it will take them?

A. $26x + 29x = 225$
B. $38x + 17 = 225$
C. $55x = 225$
D. $38 + 17x = 225$

19. If a generous man wants to share his wealth ($1,427,205) among 5,278 children, which of the following is the most accurate estimate of how much each child will receive?

A. $1{,}400 \div 5$
B. $1{,}500 \div 5$
C. $1{,}400 \div 6$
D. $1{,}000{,}000 \div 5{,}000$

20. Use the two cylinders in the diagram.
How many times greater is the surface area of the large cylinder than the surface area of the small cylinder?



A. 3
B. 9
C. 18
D. 27

We are not able to provide a Raw-to-RIT chart as we had in the past. Many of the items were initially calibrated under the old standards for different grades, and these items do not cover all of the new standards. Since the item calibrations (RIT) are not accurate for the new standards, any attempt to convert a raw score to a RIT score would not be valid.

Item Number	Answer Key	Score Reporting Category	2007 Grade 7 Content Standard
1	C	7.1 : Number and Operations and Algebra	7.1.1
2	B	7.2 : Number and Operations, Algebra and Geometry	7.2.2
3	B	7.1 : Number and Operations and Algebra	7.1.1
4	B	7.3 : Measurement and Geometry	7.3.7
5	C	7.2 : Number and Operations, Algebra and Geometry	7.2.4
6	B	7.3 : Measurement and Geometry	7.3.3
7	A	7.1 : Number and Operations and Algebra	7.1.1
8	C	7.2 : Number and Operations, Algebra and Geometry	7.2.1
9	B	7.1 : Number and Operations and Algebra	7.1.4
10	C	7.2 : Number and Operations, Algebra and Geometry	7.2.5
11	C	7.3 : Measurement and Geometry	7.3.7
12	B	7.1 : Number and Operations and Algebra	7.1.3
13	A	7.2 : Number and Operations, Algebra and Geometry	7.2.2
14	B	7.3 : Measurement and Geometry	7.3.6
15	B	7.3 : Measurement and Geometry	7.3.6
16	C	7.1 : Number and Operations and Algebra	7.1.4
17	D	7.2 : Number and Operations, Algebra and Geometry	7.2.2
18	D	7.1 : Number and Operations and Algebra	7.1.4
19	A	7.1 : Number and Operations and Algebra	7.1.1
20	B	7.3 : Measurement and Geometry	7.3.6