TEST NAME: **Volume Assignment 1-10**
TEST ID: **528020**
GRADE: **08**
SUBJECT: **Mathematics**
TEST CATEGORY: **School Assessment**

04/21/15, Volume Assignment 1-10

Student:

Class:

Date:

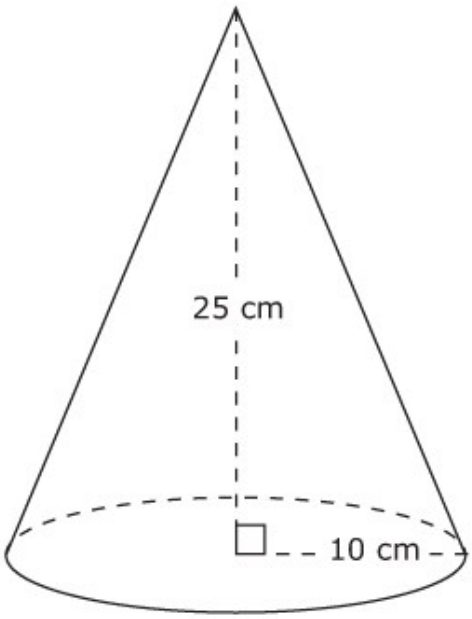
1. What is the ***approximate*** volume of a sphere with a diameter 24 cm?

   A. 57,900 cm^3

   B. 7,240 cm^3

   C. 2,410 cm^3

2. Use the diagram to answer the question.



What is the best approximation for the volume of the cone?

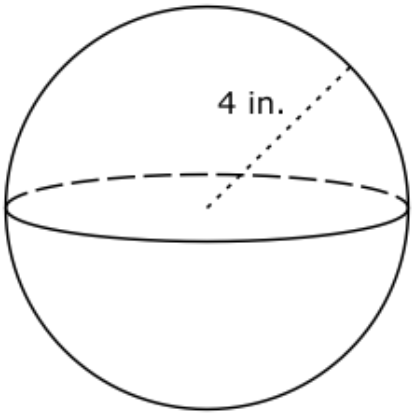
A. $524\ cm^3$

B. $654\ cm^3$

C. $2,618\ cm^3$

D. $6,545\ cm^3$

3. What is the ***approximate*** volume of the sphere below?



A. 67 in.^{3}

B. 268 in.^{3}

C. 402 in.^{3}

4. An ice cream cone is 11.5 cm high and has a diameter of 5 cm. What is the ***approximate*** volume of the ice cream cone?

A. 60 cm^3

B. 75 cm^3

C. 120 cm^3

D. 301 cm^3

5. A company sells snack mix in a cylindrical can. The can has a 5-inch diameter and holds approximately $157\ in^3$ of snack mix when it is completely full. How tall, to the nearest inch, is the can?

A. 2 inches

B. 8 inches

C. 10 inches

D. 20 inches

6. Andrea has a cylindrical jewelry box. The circumference of the base of the jewelry box is approximately 18.84 inches. The height of the jewelry box is 4 inches. What is the volume of the jewelry box? (Use 3.14 for π.)

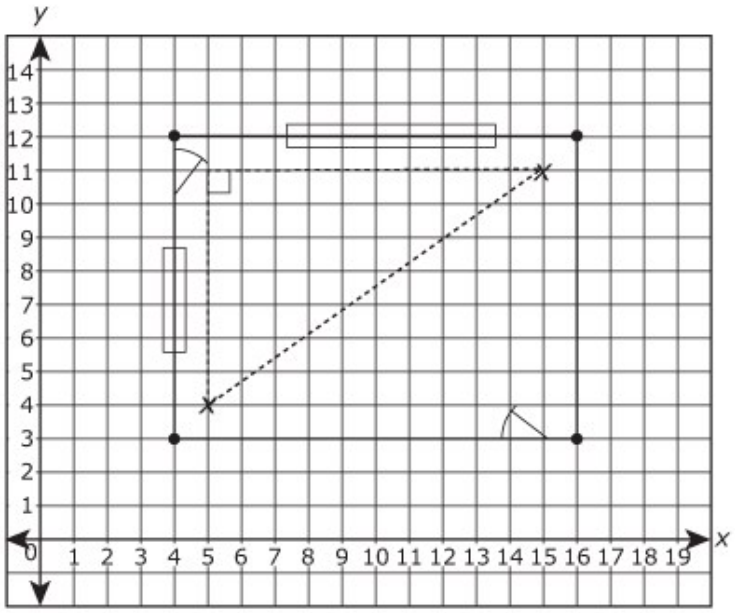
A. 75.36 cubic inches

B. 113.04 cubic inches

C. 452.16 cubic inches

D. 678.24 cubic inches

7. A designer marked an "*N*" at (5, 4) and (15, 11) on the floor plan of a room to show where two floor lamps should be placed.



The length of each square on the coordinate grid represents one foot. Which approximation is closest to the shortest distance between the floor lamps?

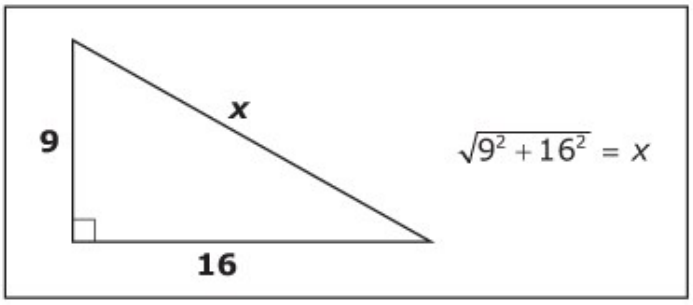
A. 12 feet

B. 14 feet

C. 15 feet

D. 17 feet

8. A student used the triangle and equation shown to find x, the missing side length.



Which equation shows the correct result of the first step?

A. $\sqrt{81 + 256} = x$

B. $\sqrt{18 + 32} = x$

C. $9 + 16 = x$

D. $\sqrt{25^2} = x$

9. Sean and Julie are landscapers. Each person charges a one-time fee plus an hourly fee. Sean uses the equation $y = 20x + 30$ to determine the charge, *y*, in dollars for working *x* hours. Julie uses this table to determine the charge, *y*, for working *x* hours.

Charges for Julie

Number of Hours Worked	0	1	2	3	4
Total Charge in Dollars	26	48	70	92	114

Which statement is true for these two landscapers?

A. Sean charges a greater one-time fee because the equation shows a greater rate of change than the table.

B. Julie charges a greater one-time fee because the table shows a greater rate of change than the equation.

C. Sean charges a greater one-time fee because the equation shows a greater *y*-intercept than the table.

D. Julie charges a greater one-time fee because the table shows a greater *y*-intercept than the equation.

10. A linear equation is modified so that the rate of change is tripled, but the *y*-intercept remains the same. Which pair of equations could represent the original equation and the modified equation?

A. $y=x+3$ and $3y=3x+9$

B. $y=9x-2$ and $y=12x-2$

C. $y=-2x-3$ and $y=-2x-9$

D. $y=-5x+6$ and $y=-15x+6$