

Due date: Mon 17 Jan 2005 11:59:00 PM EST

Calculate the maximum area of a regular octagon which can be circumscribed by a circle of radius 26.0 cm.

Tries 0/12

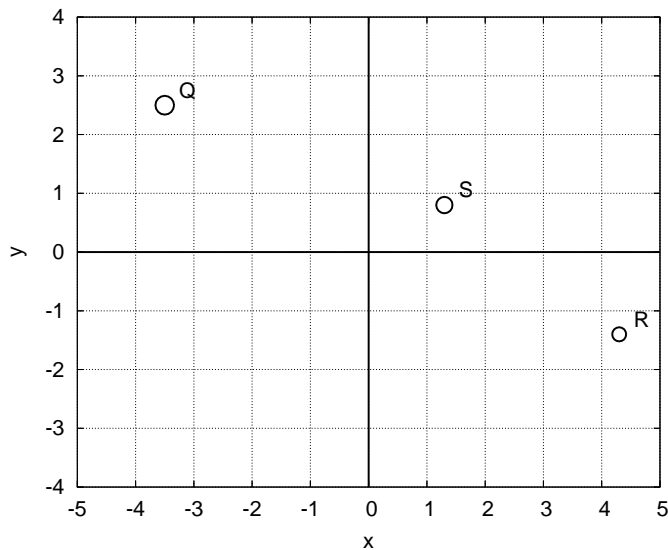
Six geometrical shapes are listed below. Rank them in order of increasing surface area, from smallest to largest, by selecting a rank from the pull down menu. The smallest is rank 1. (Equal areas have the same rank and then one rank is skipped. Example: 4 2 2 1 6 5.)

Choices: **1, 2, 3, 4, 5, 6.**

- A. Right isoceses triangle with hypotenuse = 138 mm
- B. Hexagon with sides of 46 mm
- C. Equilateral triangle with sides of 112 mm
- D. Rectangle with sides of 82 and 58 mm
- E. Square with sides of 67 mm
- F. Circle with a diameter of 73 mm

Tries 0/12

Three small spheres have their centers in a plane (see plot below). Estimate carefully the x and y coordinates of the centers. Computer will say "incorrect" unless ALL the coordinates are correct.



For Q, $x_{coordinate} =$ $y_{coordinate} =$

For S, $x_{coordinate} =$ $y_{coordinate} =$

For R, $x_{coordinate} =$ $y_{coordinate} =$

Tries 0/12

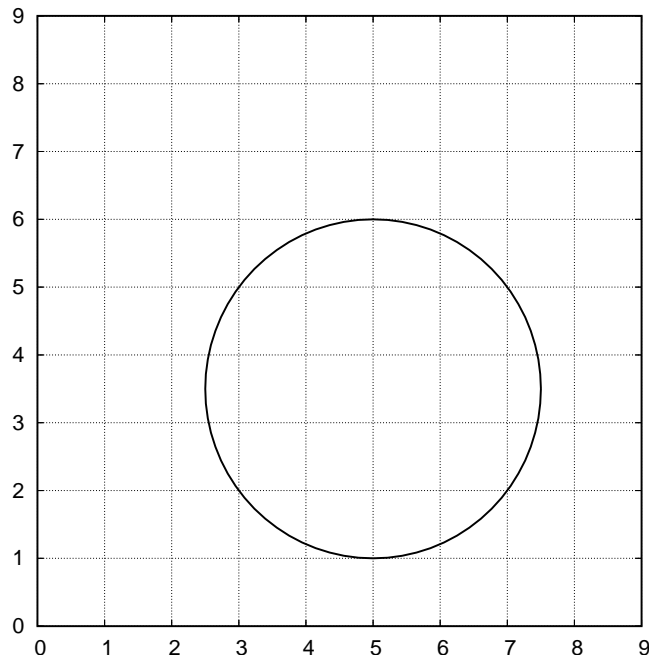
A rectangle has an area of 37.44 cm². When both the length and width of the rectangle are increased by 1.80 cm, the area of the rectangle becomes 67.50 cm². Calculate the length of the shorter of the two sides of the initial rectangle.

Tries 0/12

Calculate the length of the longer of the two sides of a rectangle which has an area of 19.50 m² and a perimeter of 20.60 m.

Tries 0/12

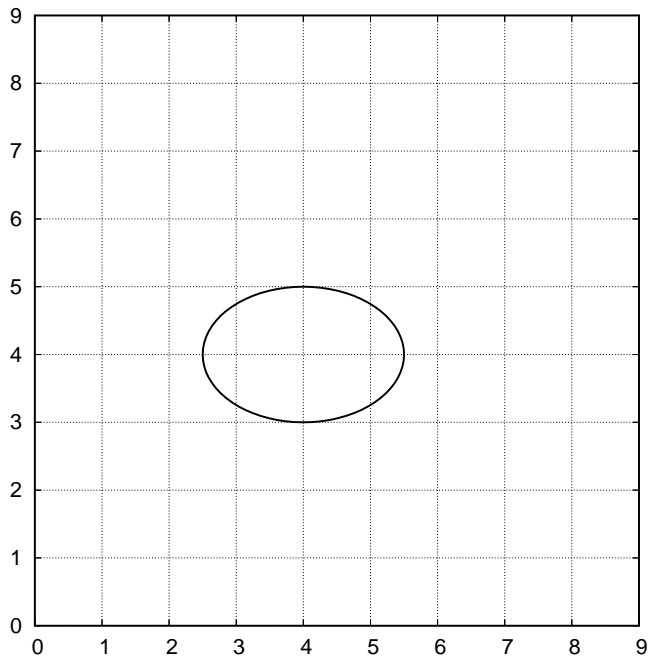
The circle inside the large square below has an area of 50.4 cm².



Calculate the area of the large square. Note that the circle passes right through a number of grid intersection points.

Tries 0/12

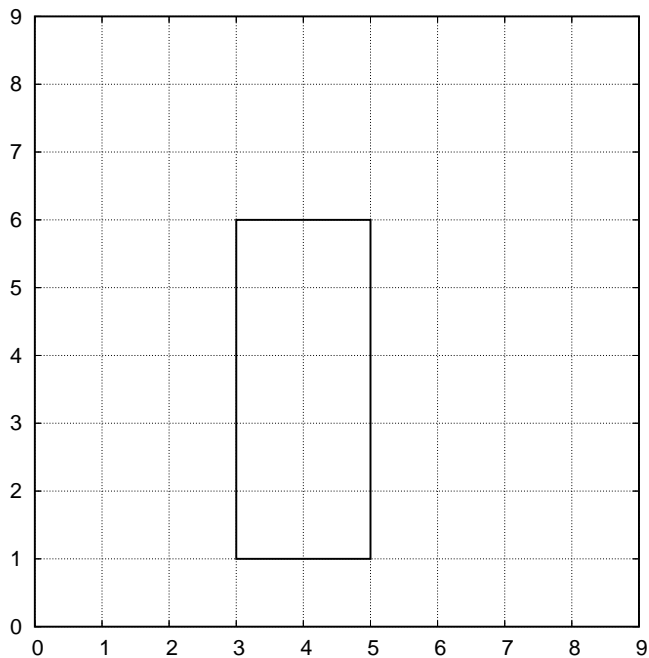
The ellipse inside the large square below has an area of 44.4 cm^2 .



Calculate the area of the large square. Note that the ellipse extends to grid lines or to mid-points between grid lines.

Tries 0/12

The large square below has an area of 53.4 m^2 . Determine the area of the enclosed rectangle.



Tries 0/12

The lengths of the sides of a triangle are 16.2 cm, 26.1 cm, and 37.6 cm. Calculate the area of the triangle.

Tries 0/12

The area of a square increases by 13.79 cm^2 when the length of the sides is increased by 1.51 cm. Calculate the length of the sides of the initial square.

Tries 0/12

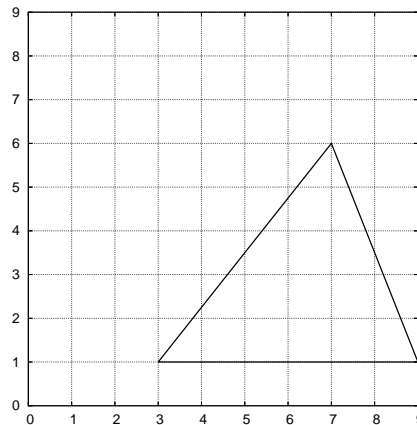
The volume of a cube increases by 23.167 cm^3 when the length of the sides is increased by 0.15 cm. Calculate the length of the sides of the initial cube.

Tries 0/12

A rectangle has a perimeter of 14.0 m. The area of the rectangle is 65.0 percent of the maximum area for a rectangle with this perimeter. Calculate the length of the shorter side.

Tries 0/12

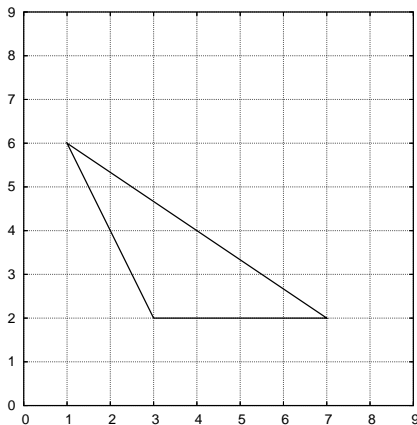
The triangle inside the large square below has an area of 56.4 cm^2 .



Calculate the area of the large square. Note that the corners of the triangle are located at grid intersection points.

Tries 0/12

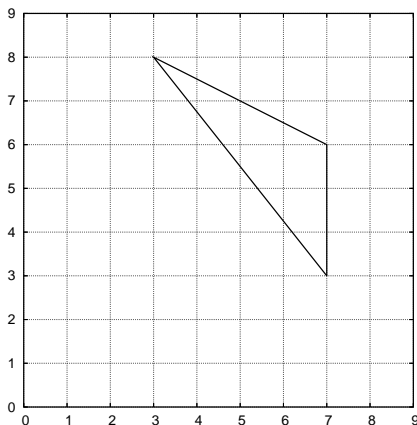
The triangle inside the large square below has an area of 74.4 cm^2 .



Calculate the area of the large square. Note that the corners of the triangle are located at grid intersection points.

Tries 0/12

The triangle inside the large square below has an area of 47.4 cm^2 .



Calculate the area of the large square. Note that the corners of the triangle are located at grid intersection points.

Tries 0/12

Calculate the area of a spherical balloon which has a volume of 0.0919 m^3

Area and Volume relations

Tries 0/12

Calculate the volume of a spherical balloon which has a surface area of 0.0891 m^2

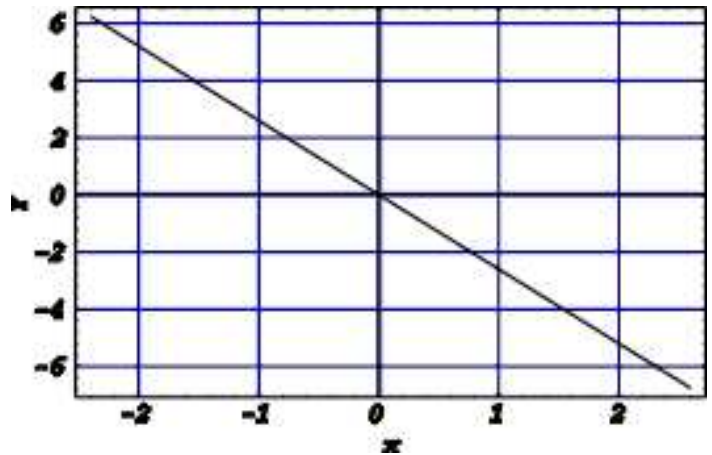
Area and Volume relations

Tries 0/12

You are handed a 6.0 cm stack of new one-dollar bills. Assume the thickness of a dollar bill is 1.7 times thicker than your textbook paper (textbook paper = $63 \mu\text{m}$). Estimate the number of dollars in your stack.

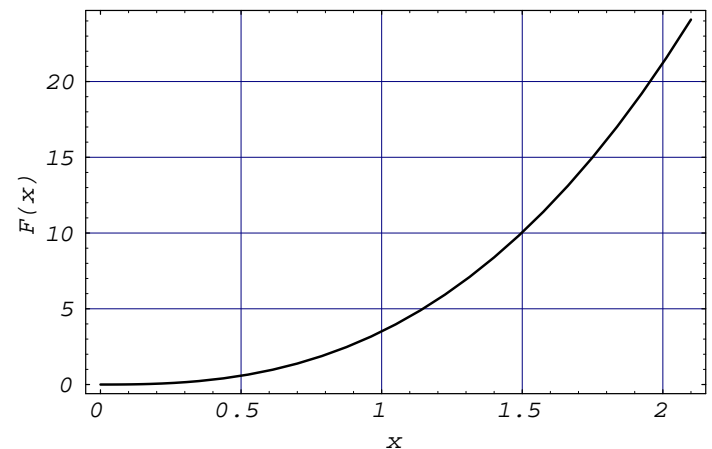
Tries 0/12

The graph below represents the function $Y=aX$. Make a careful determination of the value of a .



Tries 0/12

The graph below represents the function $F(x)=ax^b$. Make a careful determination of the value of b .



Submission not graded. Use more digits.

Tries 0/12

Find the slope of the function at $x = 1.5$ for the curve above.

Tries 0/12