MATH 141 HW 13 (6519549)

Due: Thu Oct 30 2014 11:59 PM EDT

Question 1 2 3 4 5 6 7 8 9 10 11 12 13 14

1. Question Details SCalcET6 4.7.002.MI.SA. [1569858]

This question has several parts that must be completed sequentially. If you skip a part of the question, you will not receive any points for the skipped part, and you will not be able to come back to the skipped part.

Tutorial Exercise

Find two numbers whose difference is 42 and whose product is a minimum.

2. Question Details SCalcET6 4.7.002.MI. [1387237]

Find two numbers whose difference is 184 and whose product is a minimum.

[ ] -92 (smaller number)

[ ] 92 (larger number)

3. Question Details SCalcET6 4.7.003. [1816316]

Find two positive numbers whose product is 64 and whose sum is a minimum.

[ ] 8 (smaller number)

[ ] 8 (larger number)

4. Question Details SCalcET6 4.7.005.MI.SA. [1569730]

This question has several parts that must be completed sequentially. If you skip a part of the question, you will not receive any points for the skipped part, and you will not be able to come back to the skipped part.

Tutorial Exercise

Find the dimensions of a rectangle with perimeter 60 m whose area is as large as possible.

5. Question Details SCalcET6 4.7.005.MI. [1800614]

Find the dimensions of a rectangle with perimeter 84 m whose area is as large as possible.

[ ] 21 m (smaller value)

[ ] 21 m (larger value)

6. Question Details SCalcET6 4.7.006. [656935]

Find the dimensions of a rectangle with area 1000 m^2 whose perimeter is as small as possible. (Give your answers in increasing order, to the nearest meter.)

[ ] 32 m
[ ] 32 m

7. Question Details SCalcET6 4.7.011. [1817529]

A farmer wants to fence an area of 6 million square feet in a rectangular field and then divide it in half with a fence parallel to one of the sides of the rectangle. What should the lengths of the sides of the rectangular field be so as to minimize the cost of the fence?

[ ] 2,000 ft (smaller value)
[ ] 3,000 ft (larger value)

8. Question Details SCalcET6 4.7.012. [1816036]

A box with a square base and open top must have a volume of 62,500 cm^3. Find the dimensions of the box that minimize the amount of material used.

sides of base [ ] 50 cm
height [ ] 25 cm

9. Question Details SCalcET6 4.7.013.MI.SA. [1569806]

This question has several parts that must be completed sequentially. If you skip a part of the question, you will not receive any points for the skipped part, and you will not be able to come back to the skipped part.

Tutorial Exercise

If 4,800 cm^2 of material is available to make a box with a square base and an open top, find the largest possible volume of the box.

10. Question Details SCalcET6 4.7.013.MI. [1387453]

If 30,000 cm^2 of material is available to make a box with a square base and an open top, find the largest possible volume of the box.

[ ] 500000 cm^3

11. Question Details SCalcET6 4.7.014. [1817274]

A rectangular storage container with an open top is to have a volume of 10 m^3. The length of this base is twice the width. Material for the base costs $20 per square meter. Material for the sides costs $12 per square meter. Find the cost of materials for the cheapest such container. (Round your answer to the nearest cent.)

$ [ ] 327.08

12. Question Details SCalcET6 4.7.030.MI.SA. [1529586]

This question has several parts that must be completed sequentially. If you skip a part of the question, you will not receive any points for the skipped part, and you will not be able to come back to the skipped part.

Tutorial Exercise

A Norman window has the shape of a rectangle surmounted by a semicircle. (Thus the diameter of the semicircle is equal to the width of the rectangle.) If the perimeter of the window is 28 ft, find the value of x so that the greatest possible amount of light is admitted.

13. Question Details SCalcET6 4.7.031. [1817486]

The top and bottom margins of a poster are each 9 cm and the side margins are each 6 cm. If the area of printed material on the poster is fixed at 864 cm^2, find the dimensions of the poster with the smallest area.

width [ ] 36 cm

height [ ] 54 cm

14. Question Details SCalcET6 4.7.032. [803672]

A poster is to have an area of 150 in^2 with 1 inch margins at the bottom and sides and a 5 inch margin at the top. What dimensions will give the largest printed area? (Give your answers correct to one decimal place.)

[ ] 7.1 in (width)

[ ] 21.2 in (height)

Assignment Details

Name (AID): **MATH 141 HW 13 (6519549)**
Submissions Allowed: **100**
Category: **Homework**

Feedback Settings
Before due date
Question Score

Code:
Locked: **Yes**
Author: **Blanco-Silva, Francisco (** blanco@math.sc.edu **)**
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