| Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Instructions

Here are some review questions from Sections 8.1, 8.2, 8.3, 10.0, 10.1, and 11.2..
Please work some example problems and bring suggestions to class as to which
problems you would like to see on the exam. I am thinking we should have a 10
question test, and I would like to include at least 1 question from each section. I am
thinking 4-5 problems from section 10.0.. Again, if you have any questions, please
email me: Joshua.Patterson@tamuc.edu

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1.   Question Details   JModd7 8.1.005.CMI. [1639473]

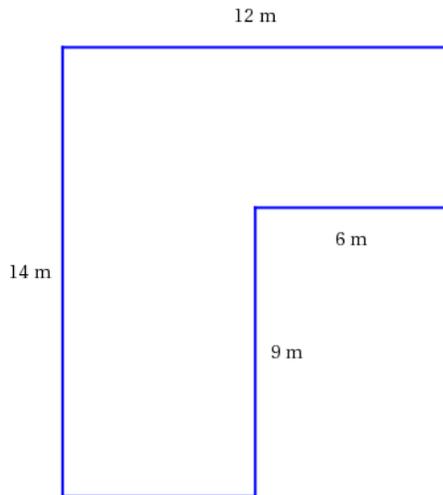Find the area of the figure. (Round your answer to one decimal place.)

[ ]   21.8 ft^2

6.8 ft

3.2 ft

6.8 ft

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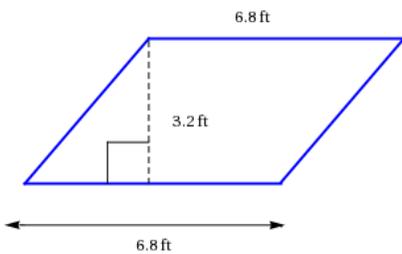
2.   Question Details   JModd7 8.1.016. [1639507]

Consider the following figure.

12 m

14 m

6 m

9 m

(a) Find the area of the figure.

[ ]   114 m^2

(b) Find the perimeter of the figure.

[ ]   52 m

3.   Question Details   JModd7 8.1.018. [1639648]

Consider the following figure. (Round your answers to one decimal place.)

7.1 in

7.1 in
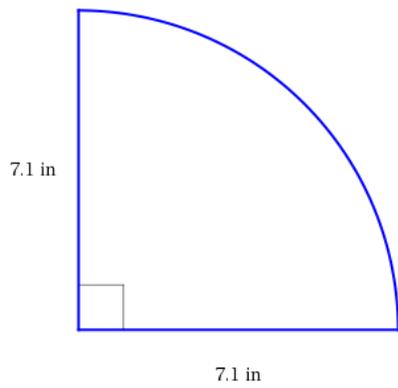
(a) Find the area of the figure.
[   ] 🔑 39.6 in^2

(b) Find the perimeter of the figure.
[   ] 🔑 25.4 in

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4.   Question Details   JModd7 8.2.003.CMI. [1643940]

Find the volume and the surface area of the figure. (Round your answers to two decimal places.)

13 in.

13 in.
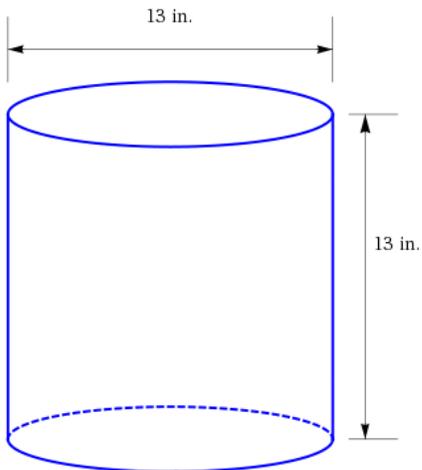
(a) the volume
[   ] 🔑 1725.52 in^3

(b) the surface area
[   ] 🔑 796.39 in^2

5.   Question Details   JModd7 8.2.006.CMI. [1643888]

Find the volume and the surface area of the figure. (Round your answers to two decimal places.)

$$3 \frac{5}{8} \text{ in.}$$
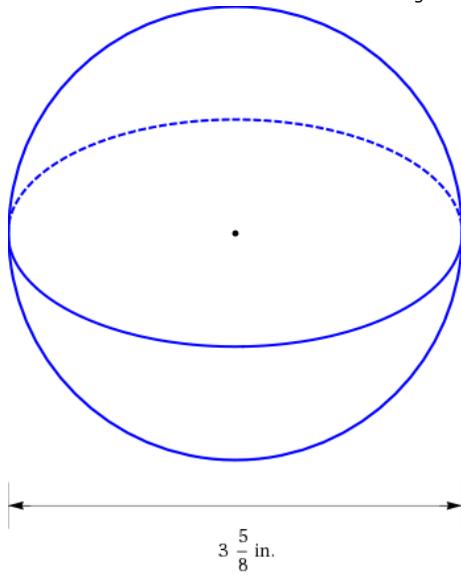
(a) the volume

24.94 in^3

(b) the surface area

41.28 in^2

6.   Question Details   JModd7 8.2.007. [1643816]

Find the volume of the figure. All dimensions are given in feet. (Round your answer to two decimal places.)

16.76 ft^3

4

4

7. Question Details   JModd7 8.2.015. [1643973]
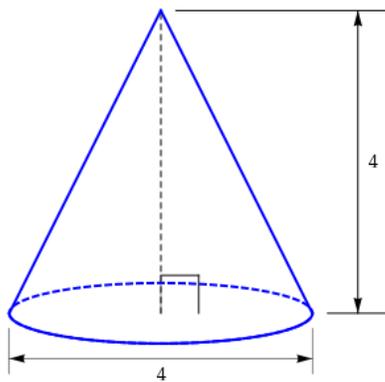
From a 10-inch-by-14-inch piece of cardboard, 2.5-inch-square corners are cut out, as shown in the figure below, and the resulting flaps are folded up to form an open box. Find the volume and the external surface area of the box.


2.5 x 2.5

10 in.

14 in.
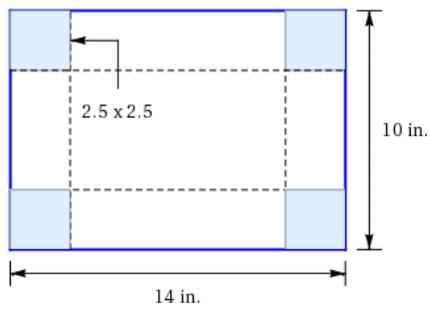
(a) the volume

[   ] 🔑 112.5 in^3

(b) the external surface area

[   ] 🔑 115 in^2

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8. Question Details   JModd7 8.2.018. [1643917]
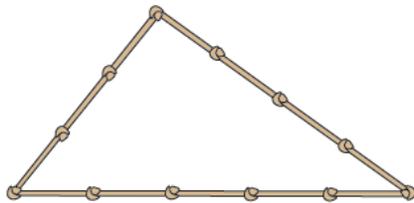
A propane gas tank consists of a cylinder with a hemisphere at each end. Find the volume of the tank if the overall length is 10 feet and the diameter of the cylinder is 4 feet, as shown in the figure. (Round your answer to two decimal places.)

[   ] 🔑 108.91 ft^3

4 ft

10 ft

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9. Question Details   JModd7 8.3.004. [1643969]
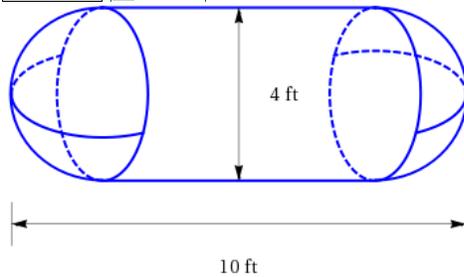
Determine whether the configuration of knotted ropes would form a right triangle.

○ 🔑 Yes

○ No

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10. Question Details   JModd7 8.3.017. [1643908]

Find the perimeter of a triangle having sides with the following measurements: 4 cubits, 5 palms, 3 fingers; 5 cubits, 3 palms, 3 fingers; 6 cubits, 4 palms, 2 fingers.

[   ] 🔑 17 cubits

11.   Question Details   JModd7 8.3.020. [1643928]

A rectangular field measures 60 cubits by 1500 cubits. Find the area of this field in setats.

[_____] 🔑 9 setats

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12.   Question Details   JModd7 10.0A.001. [1666806]

Find the value of v.

$$v = \log_2 4$$

$v =$ [_____] 🔑 2

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13.   Question Details   JModd7 10.0A.004. [1666735]

Find the value of v.

$$v = \log_3\left(\frac{1}{3}\right)$$

$v =$ [_____] 🔑 -1

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14.   Question Details   JModd7 10.0A.007. [1666817]

Find the value of u.

$$\log_7 u = 0$$

$u =$ [_____] 🔑 1

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15.   Question Details   JModd7 10.0A.009.CMI. [1666765]

Find the value of b.

$$\log_b 9 = 2$$

$b =$ [_____] 🔑 3

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16.   Question Details   JModd7 10.0A.013.CMI. [1666827]

Rewrite the logarithm as an exponential equation. (Use capital letters for variables R and W.)

$$R = \log_b W$$

$$\boxed{W = b^R}$$

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17.   Question Details   JModd7 10.0A.020. [1666812]

Rewrite the exponential equation as a logarithm. (Use capital letters for variables U and X.)

$$b^U = X$$

$$\boxed{\log_b(X) = U}$$

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18.   Question Details   JModd7 10.0A.027. [1666732]

Use a calculator to find each value. (Round your answers to eight decimal places.)

(a) $e^{1.6}$

[_____] 🔑 4.95303242

(b) $10^{1.6}$

[_____] 🔑 39.81071706

19. Question Details   JModd7 10.0A.046. [1666772]

Use a calculator to find each value. (Round your answers to eight decimal places.)

(a) $\ln(e^{3.4})$

[   ] 🔑 3.4

(b) $\log(10^{3.4})$

[   ] 🔑 3.4

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20. Question Details   JModd7 10.0A.050. [1666760]

Use a calculator to find each value. (Round your answers to eight decimal places.)

(a) $e^{\ln 3.9}$

[   ] 🔑 3.9

(b) $10^{\log 3.9}$

[   ] 🔑 3.9


21. Question Details   JModd7 10.1.003.CMI. [1672779]

A house is purchased for $140,000 in January 2004. A year later, the house next door is sold for $149,800. The two houses are of the same style and size and are in similar condition, so they should have equal value.

Use the model $v = 140e^{0.0676586485t}$, where t is the number of years after January 2004 and v is the value in thousands of dollars, to predict when the house would be worth $240,000.

The house will be worth $240,000 in ---Select--- 🔑 December , [   ] 🔑 2011 .

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22. Question Details   JModd7 10.1.013.CMI. [1666755]

A biologist is conducting an experiment that involves a colony of fruit flies. (Biologists frequently study fruit flies because their short life span allows the experimenters to easily study several generations.) One day, there were 2,630 flies in the colony. Three days later, there were 5,580.

(a) Develop the mathematical model that represents the population p of flies. (Write your model in terms of t, where t is measured in days. Round the coefficient of t to seven decimal places.)
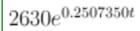
$p(t) =$ $2630e^{0.2507350t}$

(b) Use the model to predict the population after one week. (Round your answer up to the next whole number.)

[   ] 🔑 15,213 flies

(c) Use the model to predict when the population will be double its initial size. (Round your answer to one decimal place.)

[   ] 🔑 2.8 days

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23. Question Details   JModd7 11.2.019.CMI. [1646143]

Solve the system with the elimination method. Check your answers by substituting them back in.

$4x + 7y = 15$
$8x - 3y = 13$

$(x, y) = \left(\right.$ [   ] 🔑 2 , [   ] 🔑 1 $\left.\right)$

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24. Question Details   JModd7 11.2.022.CMI. [1646111]

Solve the system with the elimination method. Check your answers by substituting them back in.

$5x - 2y = -23$
$x + 2y = 5$

$(x, y) = \left(\right.$ [   ] 🔑 -3 , [   ] 🔑 4 $\left.\right)$

Assignment Details