

Question

1 2 3 4 5 6 7 8 9

Description

Section 8.3 - Egyptian Geometry

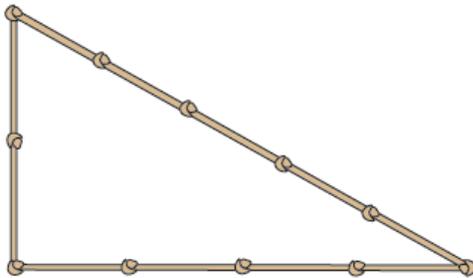
Instructions

Please work all homework questions and clearly label / place your answers in the boxes (or parenthesis) provided. If you have questions, please feel free to email me at Joshua.Patterson@tamuc.edu

1. Question Details

JModd7 8.3.002. [1643817]

Determine whether the configuration of knotted ropes would form a right triangle.

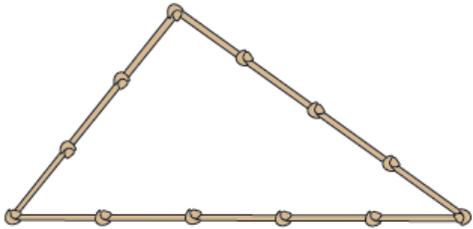


- Yes
- No

2. Question Details

JModd7 8.3.004. [1643969]

Determine whether the configuration of knotted ropes would form a right triangle.



- Yes
- No

3. Question Details

JModd7 8.3.014.CMI. [1643882]

For a circle of radius 7 palms, do the following.

(a) Use $\pi = \frac{256}{81}$ (the Egyptian approximation of pi) to find the area of the circle. (Round your answer to two decimal places.)

square palms

(b) Use the value of π contained in a scientific calculator to find the area of the circle. (Round your answer to two decimal places.)

square palms

(c) Find the error of the Egyptian calculation relative to the calculator value. (Round your answer to one decimal place.)

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4. Question Details

JModd7 8.3.017. [1643908]

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

cubits

5. Question Details

JModd7 8.3.020. [1643928]

A rectangular field measures 40 cubits by 1000 cubits. Find the area of this field in setats.

setats

6. Question Details

JModd7 8.3.021. [1643829]

A triangular field has sides that measure 180 cubits, 240 cubits, and 300 cubits. Find the area of this field in setats.

setats

7. Question Details

JModd7 8.3.022.CMI. [1643986]

A rectangular room is 16 cubits long, 12 cubits wide, and 8 cubits high. Find the volume of this room in khar.

khar

8. Question Details

JModd7 8.3.023. [1643851]

The area of a square is 9 setats. Find the length of a side s of this square. Express your answer in the following units.

(a) $s =$ khet

(b) $s =$ cubits

9. Question Details

JModd7 8.3.025. [1643837]

Problem 41 of the Rhind Papyrus pertains to finding the volume of a cylindrical granary. The diameter of the granary is 9 cubits, and its height is 10 cubits.

(a) Calculate the volume of this granary, in khar, using the Egyptian method (Problem 48 of the Rhind Papyrus) to calculate the area of a circle.

khar

(b) Calculate the volume of this granary, in khar, using the conventional formula $A = \pi r^2$ to calculate the area of a circle. (Round your answer to two decimal places.)

khar

(c) Find the error of the Egyptian calculation of volume relative to the conventional calculation. (Round your answer to one decimal place.)

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