

Student Name _____



MCAAP Maryland Comprehensive
Assessment Program

Geometry
Test Booklet

Practice Test

Large Print

TEST BOOKLET SECURITY BARCODE

Unit 1

(Non-Calculator)

Directions:

Today, you will take Unit 1 of the Geometry Practice Test. You will not be able to use a calculator.

Read each question. Then, follow the directions to answer each question. Circle the answer or answers you have chosen in your test booklet. If you need to change an answer, be sure to erase your first answer completely.

If a question asks you to show or explain your work, you must do so to receive full credit. Only responses written within the provided space will be scored.

If you do not know the answer to a question, you may go on to the next question. If you finish early, you may review your answers and any questions you did not answer in this unit ONLY. Do not go past the stop sign.

Directions for Completing the Answer Grids

1. Work the problem and find an answer.
2. Write your answer in the boxes at the top of the grid.
3. Print only one number or symbol in each box. Do not leave a blank box in the middle of an answer.
4. Fractions cannot be entered into an answer grid and will not be scored. Enter fractions as decimals.
5. See below for examples on how to correctly complete an answer grid.

EXAMPLES

To answer -3 in a question, fill in the answer grid as shown below.

-	3					
⊖						
	⊙	⊙	⊙	⊙	⊙	⊙

To answer $.75$ in a question, fill in the answer grid as shown below.

.	7	5				
⊖						
	⊙	⊙	⊙	⊙	⊙	⊙

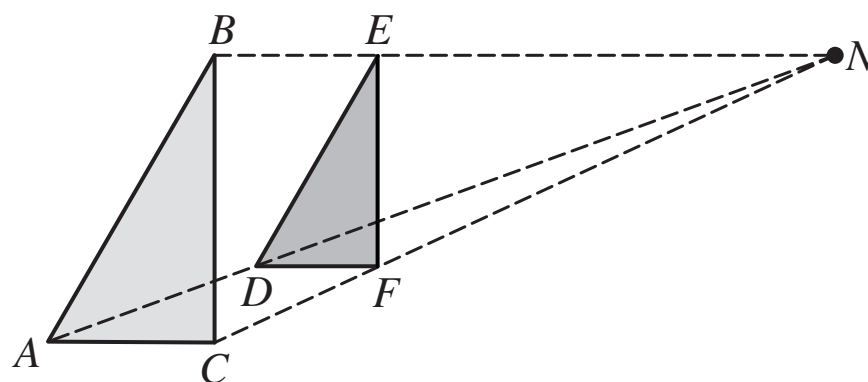
- 1 Starting with \overline{PQ} (not shown) a square will be constructed using a compass and straightedge so that \overline{PQ} is one of its sides.

Which other constructions **must** be completed during the construction of the square?

Select **all** that apply.

- A An angle bisector of $\angle P$ or $\angle Q$
- B The perpendicular bisector of \overline{PQ}
- C A right angle with vertex P or vertex Q
- D A segment with the same length as \overline{PQ}
- E An arc of a circle with center P or center Q

- 2 In the following figure, $\triangle DEF$ is mapped onto $\triangle ABC$ by a dilation with center N .

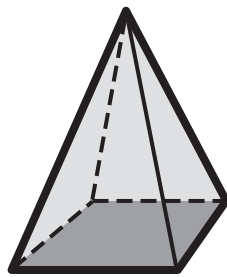


If $EN = 16$ and $BN = 20$, what is the scale factor of the dilation?

Enter your answer in the space provided.

⊖							
●	●	●	●	●	●	●	●

- 3 The square pyramid shown in the following figure is to be sliced by a plane.



Which of the following two-dimensional shapes are possible cross sections formed when the pyramid is sliced by the plane?

Select **all** that apply.

- A Isosceles triangle
 - B Square
 - C Nonsquare rectangle
 - D Isosceles trapezoid
 - E Regular hexagon
- 4 Square $ABCD$ is graphed in the xy -plane with origin O . A transformation maps $ABCD$ onto $A'B'C'D'$.

Which statements must be true?

Select **all** that apply.

- A If the transformation is a translation, then $\overline{AA'} \cong \overline{BB'}$.
- B If the transformation is a translation, then $\overline{OA'} \cong \overline{OA}$.
- C If the transformation is a rotation about O , then $\overline{A'B'} \cong \overline{AB}$.
- D If the transformation is a rotation about O , then $\overline{AA'} \cong \overline{BB'}$.
- E If the transformation is a reflection across the x -axis, then $\overline{A'B'} \cong \overline{AB}$.
- F If the transformation is a reflection across the x -axis, then $\overline{OA'} \cong \overline{OA}$.





You have come to the end of Unit 1 of the test. Review your answers from Unit 1 only.







Unit 2 (Calculator)

Directions:

Today, you will take Unit 2 of the Geometry Practice Test. You will be able to use a calculator.

Read each question. Then, follow the directions to answer each question. Circle the answer or answers you have chosen in your test booklet. If you need to change an answer, be sure to erase your first answer completely.

If a question asks you to show or explain your work, you must do so to receive full credit. Only responses written within the provided space will be scored.

If you do not know the answer to a question, you may go on to the next question. If you finish early, you may review your answers and any questions you did not answer in this unit ONLY. Do not go past the stop sign.



Directions for Completing the Answer Grids

1. Work the problem and find an answer.
2. Write your answer in the boxes at the top of the grid.
3. Print only one number or symbol in each box. Do not leave a blank box in the middle of an answer.
4. Fractions cannot be entered into an answer grid and will not be scored. Enter fractions as decimals.
5. See below for examples on how to correctly complete an answer grid.

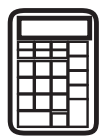
EXAMPLES

To answer -3 in a question, fill in the answer grid as shown below.

-	3					
⊖						
	⊙	⊙	⊙	⊙	⊙	⊙

To answer $.75$ in a question, fill in the answer grid as shown below.

.	7	5				
⊖						
	⊙	⊙	⊙	⊙	⊙	⊙



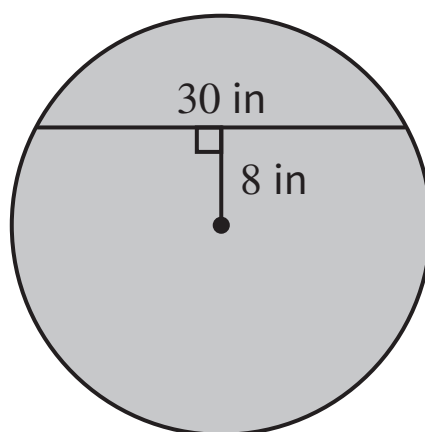
Mathematics

- 1 What is an equation for the line in the xy -plane that passes through the point $(-4, 5)$ and is perpendicular to the line with the equation $y = \frac{1}{2}x + 5$?

Select one answer.

- A** $y = -2x - 3$
B $y = -2x + 3$
C $y = 2x - 3$
D $y = 2x + 13$

- 2 A 30-inch chord in a circle is 8 inches from the center of the circle, as shown in the following figure.



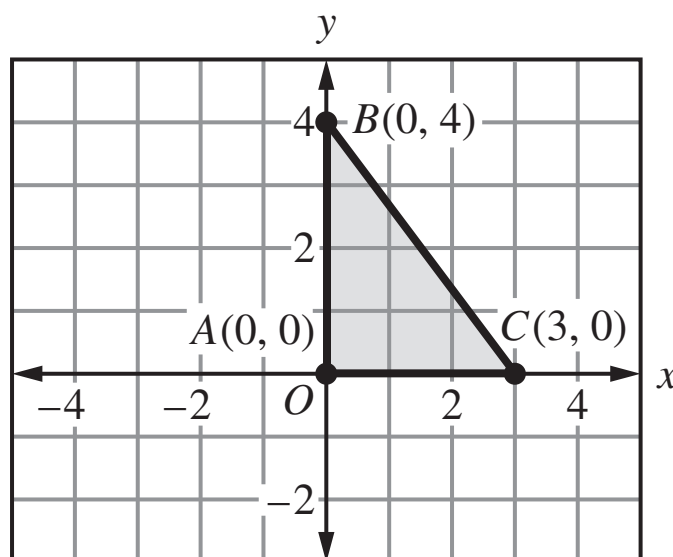
What is the length, in inches, of the radius of the circle?

Enter your answer in the space provided.

-							
	○	○	○	○	○	○	○



- 3 Triangle ABC , shown in the following xy -plane, is to be rotated 360° about the y -axis to generate a solid.



What solid will be generated?

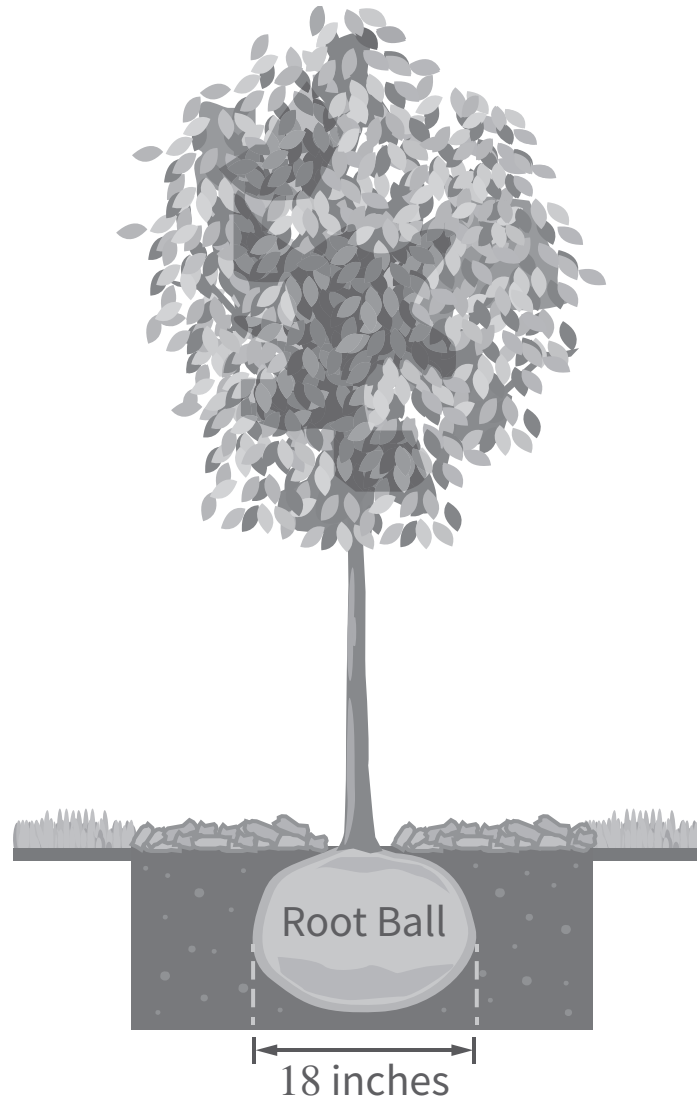
Select one answer.

- A A cone with a base radius of 3 units and a height of 4 units
- B A cone with a base radius of 4 units and a height of 3 units
- C A cylinder with a base radius of 3 units and a height of 4 units
- D A cylinder with a base radius of 4 units and a height of 3 units



Mathematics

- 4 Mahari will dig a hole in which to plant a new tree. The root ball of the tree has a diameter of 18 inches and will be placed in the hole, as shown in the following figure.



**Part A**

The hole needs to be twice as wide as the diameter of the root ball and deep enough for the entire root ball to fit inside. After placing the tree in the hole, Mahari will fill the rest of the hole with soil.

Approximate the amount of soil, **in cubic feet**, that Mahari needs to fill the hole. Show how you arrived at your answer.

Enter your answer and work in the space provided.

4 Part A



Mathematics

Part B

After filling the hole with dirt, Mahari will place mulch within a circle around the tree. The outer diameter of the circle is the diameter of the hole. The diameter of the base of the tree trunk is 6 inches.

What is the area, **in square feet**, that the mulch will cover? Show how you arrived at your answer.

Enter your answer and your work in the space provided.

4 Part B





You have come to the end of Unit 2 of the test. Review your answers from Unit 2 only.





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