



Geometry

End-of-Course Assessment

Sample Questions

Regular Print Paper-Based Accommodation

The intent of these sample test materials is to orient teachers and students to the types of questions on the Geometry EOC Assessment. By using these materials, students who will use the regular print paper-based accommodation will become familiar with the types of items and response formats they will see on the paper-based form of the test. On computer-based forms of the Geometry EOC Assessment, students respond to some items using fill-in response boxes. **On the regular print paper-based form, students respond to the same items by filling in their answers on a grid.**

The sample questions and answers are not intended to demonstrate the length of the actual test, nor should student responses be used as an indicator of student performance on the actual test. Additional information about test items can be found in the *Geometry EOC Assessment Test Item Specifications* at <http://fcab.fldoe.org/eoc/itemspecs.asp>.

The Geometry EOC Assessment and sample questions and answers are based on the 2007 Next Generation Sunshine State Standards.

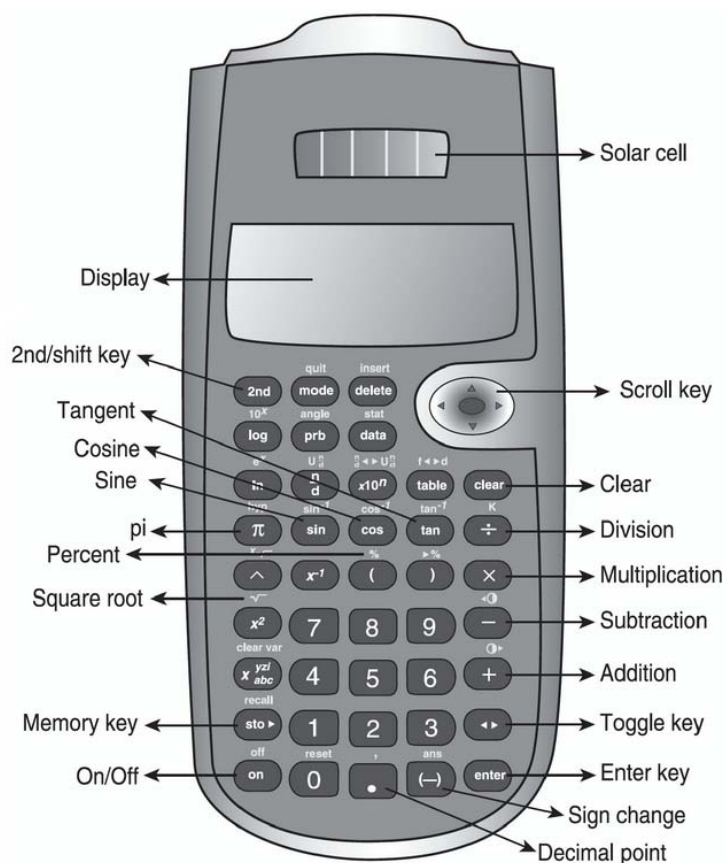
The regular print paper-based accommodation sample questions and the sample answers are only available online at <http://fcab.fldoe.org/eoc/>. Computer-based practice tests (ePATs) are available online at www.FLAssessments.com/ePAT.

Directions for Answering the Geometry Sample Questions

Mark your answers in this booklet. You may need formulas and conversions to help you solve some of the problems. You may refer to the Reference Sheet on pages 4 and 5 as needed.

This is a picture of a generic scientific calculator and its parts.

GENERIC SCIENTIFIC CALCULATOR



HELPFUL HINTS FOR USING A SCIENTIFIC CALCULATOR

1. Read the problem very carefully. Then decide whether or not you need the calculator to help you solve the problem.
2. When starting a new problem, always clear your calculator.
3. If you see an error message in the display, clear the error before you begin.
4. If the number in the display is not one of the answer choices, check your work.
5. To find a decimal or fraction equivalent, use the toggle key.
6. When solving items, wait until the final step to round decimal equivalents and/or approximations. Focus on whether the item specifies the decimal place, equivalent fraction, and/or pi approximation needed for the answer. In most cases, front-end estimation and truncation are not accurate processes for estimation.
7. When working with calculators, use careful and deliberate keystrokes, and always remember to check your answer to make sure it is reasonable.
8. Locate your sine (sin), cosine (cos), and tangent (tan) keys. To find the inverse, use the 2nd/shift key. Then, use the appropriate trig function key.
9. Always check your answer to make sure you have completed all of the necessary steps.
10. Students using the TI-30XS MultiView handheld calculator must set the mode to "CLASSIC." To check your calculator, press the "Mode" key. If your calculator does not have "CLASSIC" highlighted, arrow down to that line and highlight "CLASSIC" by pressing the "enter" key. To exit the "Mode" screen, press "quit" (2nd mode).

Directions for Completing the Response Grids






1. Work the problem and find an answer.
2. Write your answer in the answer boxes at the top of the grid.
 - Print your answer with the first digit in the left answer box OR with the last digit in the right answer box.
 - Print only one digit or symbol in each answer box. Do NOT leave a blank answer box in the middle of an answer.
 - Be sure to write a decimal point, fraction bar, and/or negative sign in the answer box if it is part of the answer.
 - Many answers may be entered as either a decimal or a fraction, unless the test item requires that the answer be given in a specific form. Students must NOT place a **mixed number** such as $13\frac{1}{4}$ in the answer boxes. If the answer is a mixed number, it must be converted to an improper fraction, such as $\frac{53}{4}$, or to a decimal number, such as 13.25. If $13\frac{1}{4}$ were entered as is, it would be scored as $\frac{131}{4}$ and would be counted as incorrect.
3. Fill in a bubble under each box in which you wrote your answer.
 - Fill in one and ONLY one bubble for each answer box. Do NOT fill in a bubble under an unused answer box.
 - Fill in each bubble by making a solid mark that completely fills the circle.
 - You MUST fill in the bubbles accurately to receive credit for your answer.

Algebra 1 End-of-Course and Geometry End-of-Course Assessments Reference Sheet

	Area	
Parallelogram	$A = bh$	
Triangle	$A = \frac{1}{2}bh$	
Trapezoid	$A = \frac{1}{2}h(b_1 + b_2)$	
Circle	$A = \pi r^2$	
Regular Polygon	$A = \frac{1}{2}aP$	

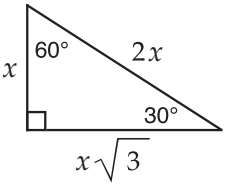
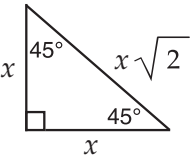
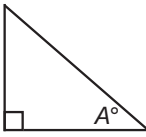
KEY	
b = base	A = area
h = height	B = area of base
w = width	C = circumference
d = diameter	V = volume
r = radius	P = perimeter
ℓ = slant height	of base
a = apothem	S.A. = surface area
Use 3.14 or $\frac{22}{7}$ for π .	

Circumference $C = \pi d$ or $C = 2\pi r$

	Volume/Capacity	Total Surface Area
	Rectangular Prism $V = bwh$ or $V = Bh$	$S.A. = 2bh + 2bw + 2hw$ or $S.A. = Ph + 2B$
	Right Circular Cylinder $V = \pi r^2 h$ or $V = Bh$	$S.A. = 2\pi rh + 2\pi r^2$ or $S.A. = 2\pi rh + 2B$
	Right Square Pyramid $V = \frac{1}{3}Bh$	$S.A. = \frac{1}{2}P\ell + B$
	Right Circular Cone $V = \frac{1}{3}\pi r^2 h$ or $V = \frac{1}{3}Bh$	$S.A. = \frac{1}{2}(2\pi r)\ell + B$
	Sphere $V = \frac{4}{3}\pi r^3$	$S.A. = 4\pi r^2$

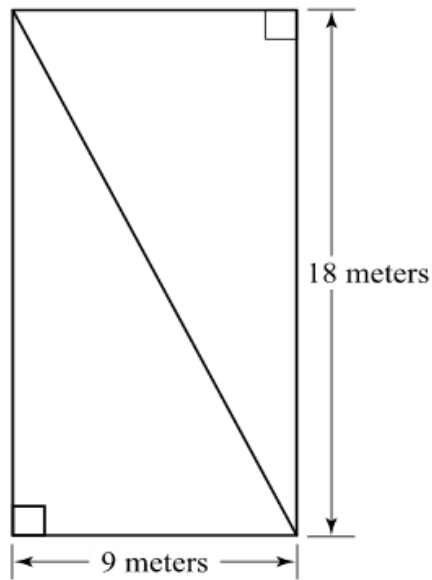
Sum of the measures of the interior angles of a polygon = $180(n-2)$
Measure of an interior angle of a regular polygon = $\frac{180(n-2)}{n}$
where: n represents the number of sides

Algebra 1 End-of-Course and Geometry End-of-Course Assessments Reference Sheet

<p style="text-align: center;">Slope formula</p> $m = \frac{y_2 - y_1}{x_2 - x_1}$ <p>where m = slope and (x_1, y_1) and (x_2, y_2) are points on the line</p>	<p style="text-align: center;">Distance between two points</p> <p>$P_1(x_1, y_1)$ and $P_2(x_2, y_2)$</p> $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
<p style="text-align: center;">Slope-intercept form of a linear equation</p> $y = mx + b$ <p>where m = slope and b = y-intercept</p>	<p style="text-align: center;">Midpoint between two points</p> <p>$P_1(x_1, y_1)$ and $P_2(x_2, y_2)$</p> $\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$
<p style="text-align: center;">Point-slope form of a linear equation</p> $y - y_1 = m(x - x_1)$ <p>where m = slope and (x_1, y_1) is a point on the line</p>	<p style="text-align: center;">Quadratic formula</p> $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ <p>where a, b, and c are coefficients in an equation of the form $ax^2 + bx + c = 0$</p>
<p style="text-align: center;">Special Right Triangles</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>30-60-90 triangle: legs x and $x\sqrt{3}$, hypotenuse $2x$.</p> </div> <div style="text-align: center;">  <p>45-45-90 triangle: legs x and x, hypotenuse $x\sqrt{2}$.</p> </div> </div>	<p style="text-align: center;">Trigonometric Ratios</p> <div style="display: flex; align-items: center;">  <div> $\sin A^\circ = \frac{\text{opposite}}{\text{hypotenuse}}$ $\cos A^\circ = \frac{\text{adjacent}}{\text{hypotenuse}}$ $\tan A^\circ = \frac{\text{opposite}}{\text{adjacent}}$ </div> </div>

Conversions	
<ul style="list-style-type: none"> 1 yard = 3 feet 1 mile = 1,760 yards = 5,280 feet 1 acre = 43,560 square feet 1 hour = 60 minutes 1 minute = 60 seconds 	<ul style="list-style-type: none"> 1 cup = 8 fluid ounces 1 pint = 2 cups 1 quart = 2 pints 1 gallon = 4 quarts 1 pound = 16 ounces 1 ton = 2,000 pounds
<ul style="list-style-type: none"> 1 meter = 100 centimeters = 1000 millimeters 1 kilometer = 1000 meters 1 liter = 1000 milliliters = 1000 cubic centimeters 1 gram = 1000 milligrams 1 kilogram = 1000 grams 	

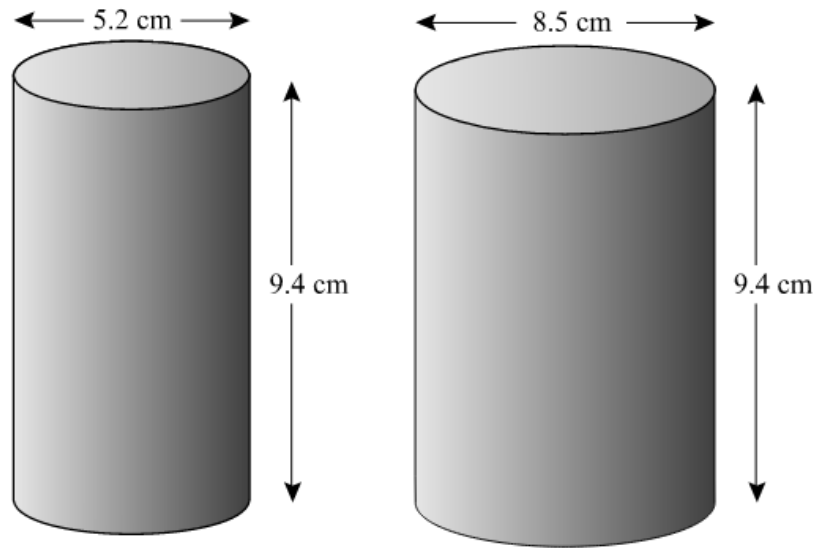
1. The dimensions and shape of a rectangular volleyball court are shown in this picture.



What is the approximate distance of a serve that is hit diagonally from one corner of the court to the other?

- Ⓐ 27.0 meters
- Ⓑ 20.1 meters
- Ⓒ 15.6 meters
- Ⓓ 12.7 meters

2. An orange juice company sells a can of frozen orange juice that measures 9.4 centimeters (cm) in height and 5.2 cm in diameter.



The company wants to sell a larger can of juice. The height of the larger can is kept at 9.4 cm, but the diameter is increased to 8.5 cm. About how much more juice will the new can hold?

- Ⓐ 1.6 times as much
- Ⓑ 1.7 times as much
- Ⓒ 2.7 times as much
- Ⓓ 3.3 times as much

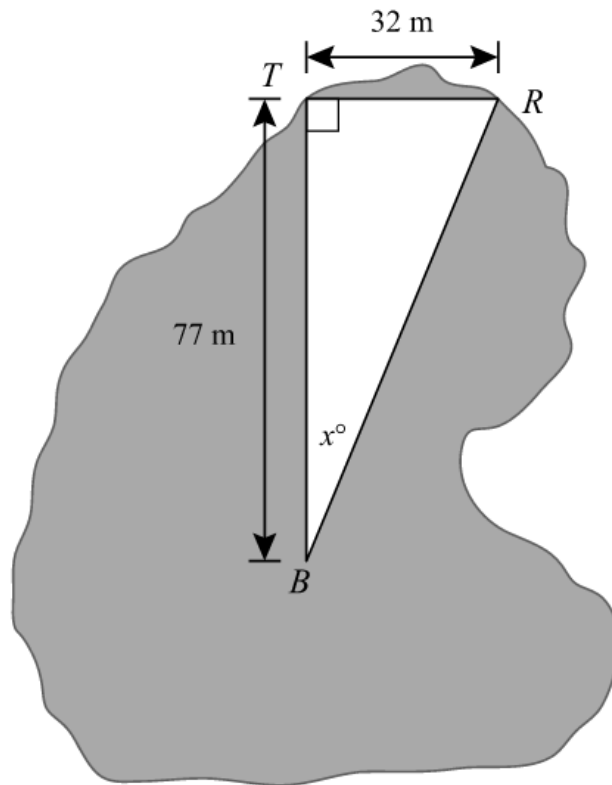
3. Diana read the following conditional statement.

If a triangle has at least two congruent sides, then it is an isosceles triangle.

Which of the following statements is the contrapositive of the conditional statement above?

- Ⓐ If a triangle is not an isosceles triangle, then it has at least two congruent sides.
- Ⓑ If a triangle is not an isosceles triangle, then it does not have at least two congruent sides.
- Ⓒ If a triangle does not have at least two congruent sides, then it is not an isosceles triangle.
- Ⓓ If a triangle is isosceles, then it has at least two congruent sides.

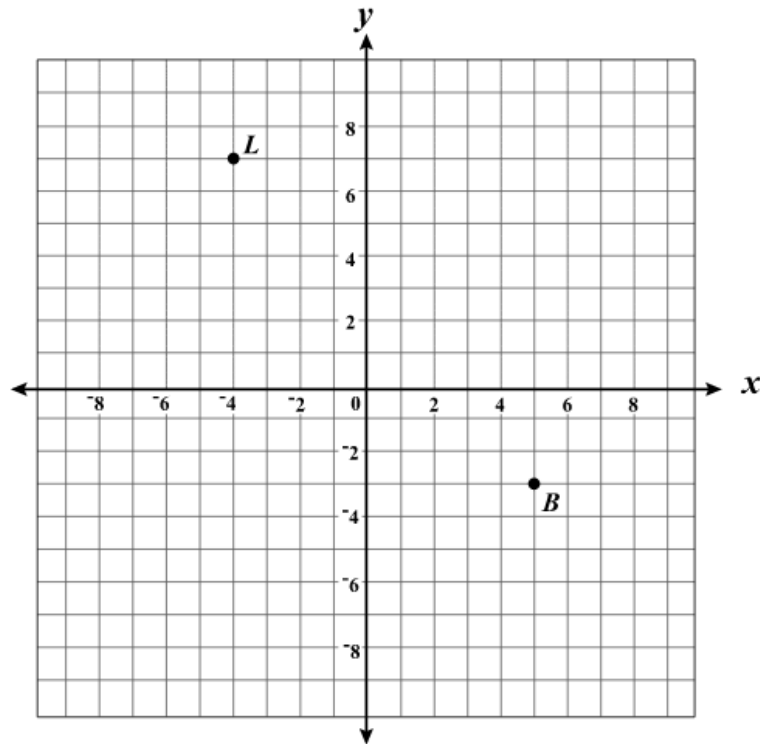
4. A tackle shop and restaurant are located on the shore of a lake and are 32 meters (m) apart. A boat on the lake heading toward the tackle shop is the distance of 77 m from the tackle shop. This situation is shown on the diagram below, where point T represents the location of the tackle shop, point R represents the location of the restaurant, and point B represents the location of the boat.



The driver of the boat wants to change direction to sail toward the restaurant. Which of the following is closest to the value of x ?

- Ⓐ 23
- Ⓑ 25
- Ⓒ 65
- Ⓓ 67

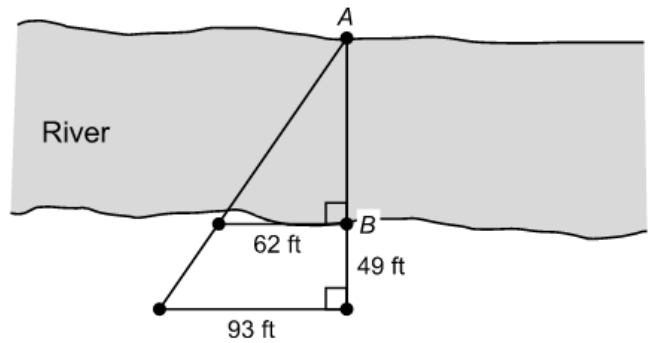
5. On a coordinate grid, the location of a lighthouse is at L , and the location of a buoy is at B . At noon, the buoy is the midpoint of the segment connecting a ship and the lighthouse on the grid.



What is the y -coordinate of the ordered pair that represents the ship's position at noon?

⊖	⊖	⊖	⊖	⊖	⊖	⊖
⊘	⊘	⊘	⊘	⊘	⊘	⊘
⊙	⊙	⊙	⊙	⊙	⊙	⊙
0	0	0	0	0	0	0
1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9

6. An engineer wanted to approximate the width, in feet (ft), of a river. She placed markers at point A and point B to represent the average width of the river. She also placed 3 other markers along the riverbank and measured the distances shown in the diagram below.



Based on this diagram, what was the width of the river, in feet (ft), from point A to point B ?

⊖	⊖	⊖	⊖	⊖	⊖	⊖
⊘	⊘	⊘	⊘	⊘	⊘	⊘
⊙	⊙	⊙	⊙	⊙	⊙	⊙
0	0	0	0	0	0	0
1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9

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