NAME: KEY

Geometry Part 3B Test Study Guide

PART B

1. Determine if the angles below form a triangle. Show your work. State YES or NO on the line.
95°, 7°, 78°

$95 + 7 = 102$
$102 + 78 = 180$ ✓

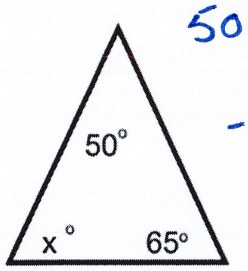
Yes

2. Determine if the angles below form a triangle. Show your work. State YES or NO on the line.
116°, 9°, 60°

$116 + 9 = 125$
$125 + 60 = 185$ x

No

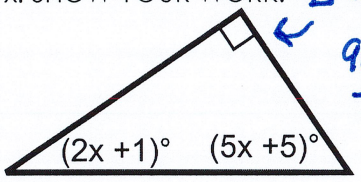
3. Write and solve the equation to find the value of the missing angle. SHOW YOUR WORK.



$50 + 65 + x = 180$
$115 + x = 180$
$-115 \quad -115$
$x = 65$

65 degrees

4. Write and solve the equation to find the value of x. SHOW YOUR WORK.

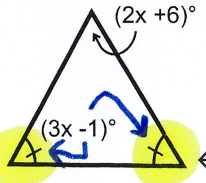


□ = 90

$90 + 2x + 1 + 5x + 5 = 180$
$7x + 96 = 180$
$-96 \quad -96$
$\frac{7x}{7} = \frac{84}{7}$
$x = 12$

x = 12 degrees

5. Write and solve the equation to find the value of the missing angle. SHOW YOUR WORK.



← Missing Angle

$2x + 6 + 3x - 1 + 3x - 1 = 180$
$8x + 4 = 180$
$-4 \quad -4$
$\frac{8x}{8} = \frac{176}{8}$
$x = 22$

Congruent

x = 22 degrees

6. Using the Triangle Inequality Theorem, determine if these sides form a triangle. SHOW YOUR WORK.
1, 5, 1

1 + 5 > 1
5 + 1 > 1
1 + 1 ✗ 5

Do the sides form a triangle? NO

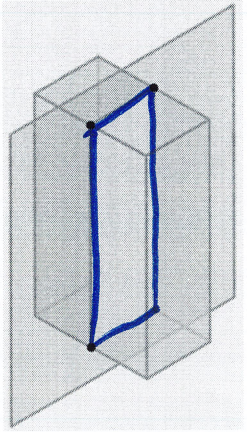
7. Find the range of lengths for the third side of the triangle using the lengths of the other two sides
7 ft and 13 ft

S + M > L

Small + Medium > Large
7 + 13 > X (20)
X + 7 > 13 (6)

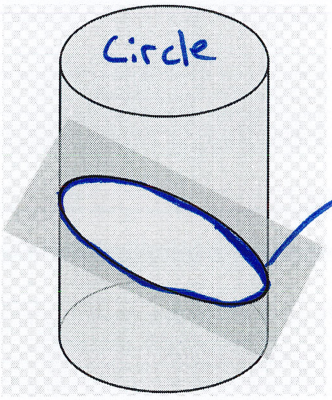
RANGE: 6 < x < 20

8. What would be the cross section of a rectangular prism that is sliced vertically?



A.) rectangle
B.) triangle
C.) pentagon
D.) trapezoid

9. Identify the shape of the cross section.



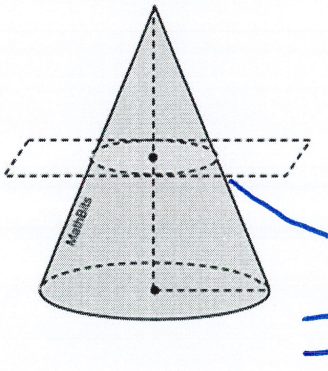
A.) rectangle

B.) ellipse

C.) triangle

D.) trapezoid

10. What would be the cross section of a cone that is sliced horizontally?



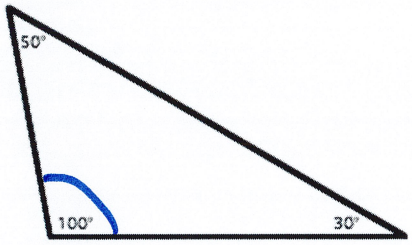
A.) rectangle

B.) ellipse

C.) triangle

D.) circle

11. What is the classification of the triangle by its angles?



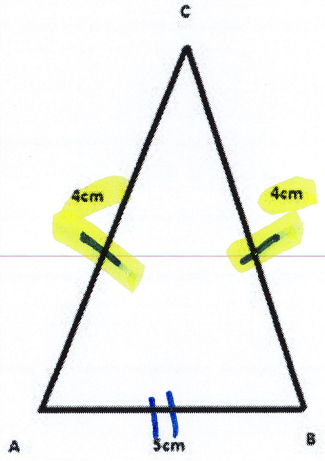
>90

A.) obtuse

B.) right

C.) acute

12. What is the classification of the triangle by its sides?

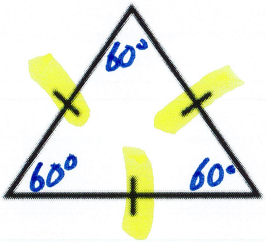


A.) equilateral

B.) scalene

C.) isosceles

13. What is the classification of the triangle by its angles and by its sides?



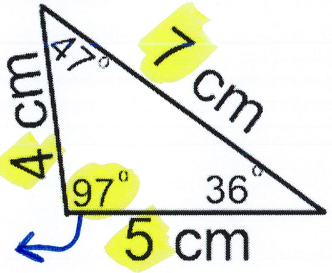
A.) acute, equilateral

B.) right, equilateral

C.) obtuse, isosceles

D.) obtuse, equilateral

14. What is the classification of the triangle by its angles and by its sides?



All different lengths (4,5,7)

>90

A.) acute, isosceles

B.) right, equilateral

C.) obtuse, scalene

D.) right, scalene