

NO CALCULATORS!!

Practice 1.4-1.6

Name _____ Period _____

Bernhard – GT GEOMETRY

MULTIPLE CHOICE: From the ACT practice book:

1. What is the perimeter in inches of an isosceles right triangle, whose hypotenuse is $8\sqrt{2}$ inches long?

- A. 8
- B. $8+8\sqrt{2}$
- C. $8+16\sqrt{2}$
- D. 16
- E. $16+8\sqrt{2}$

2. $\frac{4}{\sqrt{2}} + \frac{2}{\sqrt{3}} =$

H. $\frac{6}{\sqrt{2} + \sqrt{3}}$

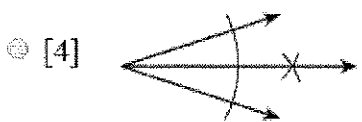
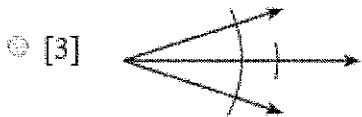
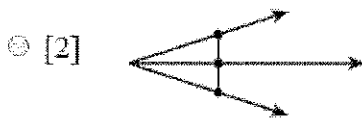
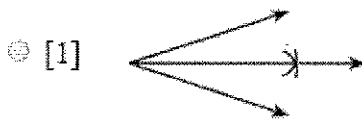
F. $\frac{4\sqrt{3} + 2\sqrt{2}}{\sqrt{5}}$

J. $\frac{6}{\sqrt{5}}$

G. $\frac{4\sqrt{3} + 2\sqrt{2}}{\sqrt{6}}$

K. $\frac{8}{\sqrt{6}}$

3. Which diagram below shows a correct mathematical construction using only a compass and a straightedge to bisect an angle?

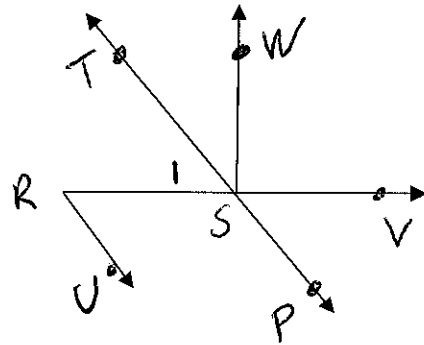


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3. Use the figure at the right.

a) Name a point in the interior of Angle TSV.

b) Name $\angle 1$ two other ways.



c) Find y , if \overline{ST} bisects $\angle RSW$, $m\angle RST = 4y + 11$, and $m\angle TSW = 6y + 5$.

d) What is the best term to describe the relationship between $\angle TSR$ and $\angle VSP$?

e) If S is the midpoint of segment \overline{TP} , $TS = 32 - 2x$, and $TP = 100$, find x .

5. Multiple Choice.

_____ a) Which of the following is NOT an undefined term in geometry?

- A. Plane B. Point C. Bisector D. Line

_____ b) Which describes the figure to the right?

- A. Hexagon, concave, not regular B. Pentagon, concave, regular
C. Hexagon, convex, not regular D. Not a polygon.



6. State whether each sentence is TRUE or FALSE. If TRUE, write TRUE in the blank. If FALSE, replace the underlined word or phrase to make a true sentence. Write that word in the blank.

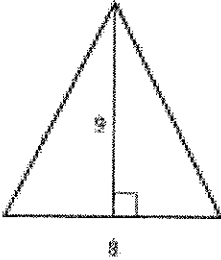
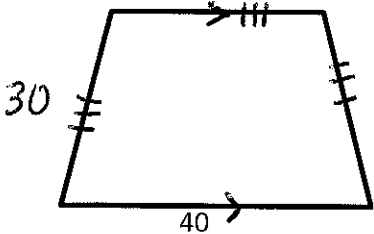
_____ a) Two angles are congruent if their measure have a sum of 90° .

_____ b) Two angles that lie in the same plane are called adjacent if they share a common side and common vertex.

_____ c) A 10-sided polygon is called a dodecagon.

7. Find $m\angle A$ if $\angle A$ is complementary to $\angle B$, $\angle B$ is supplementary to $m\angle C$, $m\angle B = 15x - 2$ and $m\angle C = 25x + 22$.

8. Find the perimeter and area each figure:

	PERIMETER	AREA
<p>A right triangle whose shorter leg measures $4\sqrt{3}$ meters long and whose hypotenuse is 12 meters long.</p>		
<p>A rectangle whose length is 6 more than four times its width.</p>		
<p>A square with a diagonal $8\sqrt{6}$ inches long.</p>		
 <p>The diagram shows an isosceles triangle with a horizontal base. A vertical line segment from the top vertex to the base represents the height, which is labeled '3'. A right-angle symbol is shown at the intersection of the height and the base. The base is labeled '8'.</p>		
<p>A square inscribed in a circle with a diameter of 12 cm.</p>		
 <p>The diagram shows an isosceles trapezoid with a longer horizontal bottom base and a shorter horizontal top base. The bottom base is labeled '40' and has a right-pointing arrow above it. The top base is labeled '30' and has a right-pointing arrow above it. Both slanted sides are marked with three short perpendicular tick marks, indicating they are equal in length.</p>		