Geometry Benchmark Test #2 Practice Again

(Geometry Standard 16)

1) Use a compass and a straight edge to construct each of these. Show all marks clearly.

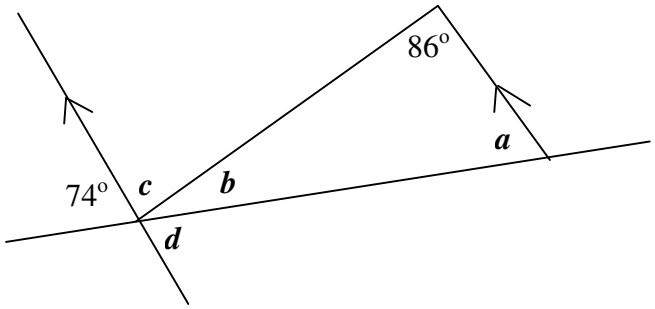
a) The perpendicular from a point X to segment $\overline{AM}$. X is NOT on the segment.
b) The bisector of an acute angle BAT .
c) The median from the vertex of the right angle in a right triangle YES.
d) An equilateral triangle and one of its altitudes.

(Geometry Standard 6)

2) Two sides of a triangle are 11 cm and 9 cm. What are three possible lengths of a third side? What is an **impossible** length of a third side?

(Geometry Standards 7 & 12)

3) Find the measures of ***a, b, c*** and ***d*** in the figure at the right.



4) Find the measure of a) an interior and b) an exterior angle of a regular 90-gon.

(Geometry Standard 17)

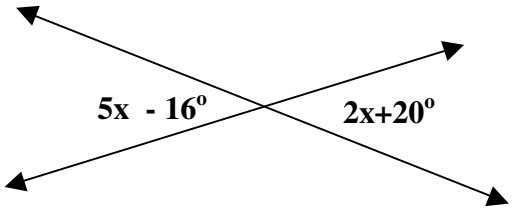
5) Find the slope and midpoint of $\overline{AB}$ if A(-5, -1) and B(1, 7) .

6) Draw the graphs of a) $y = \frac{3}{7}x - 2$. b) $y = -3x + 4$ c) $y = 3$ d) $x = 3$

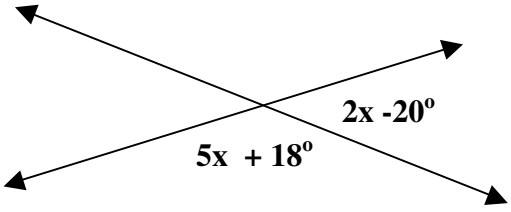
(Geometry Standard 13)

Find the value of **x** and the measure of the ***obtuse*** angle in each figure below.

7)



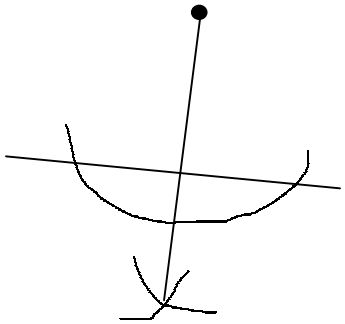
8)



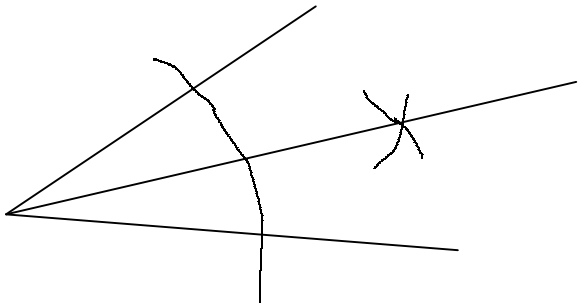
Answers are provided on the NEXT page.

Answers:

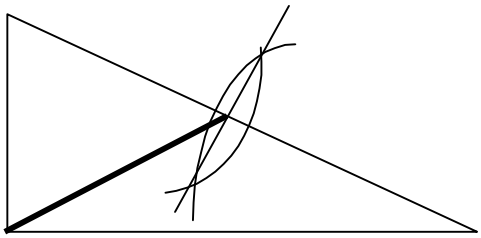
1) a)



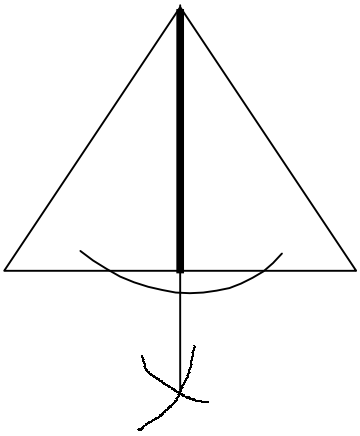
b)



c)



d)



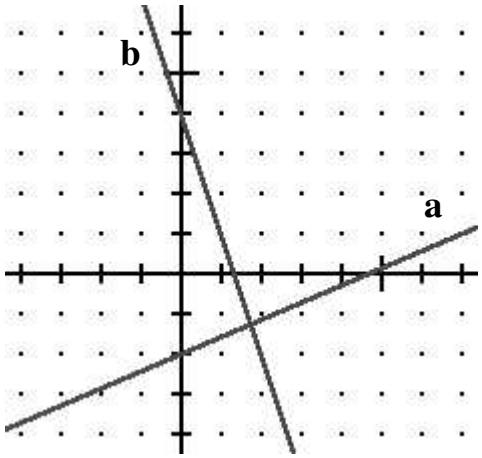
2) The third side has to be between 11 – 9 = 2cm and 11 + 9 = 20cm…. Some examples might be 5, 8, 19cm.

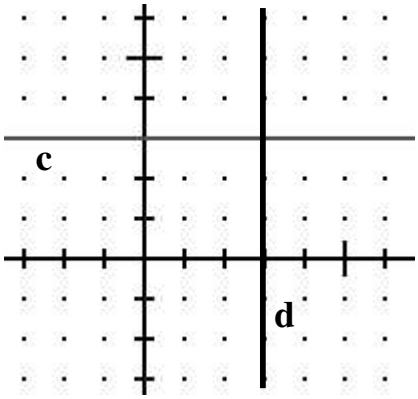
3) a = 74; b = 20; c = 86 and d = 74 degrees

4) a) 176 ^{o} (the supplement of 4 ^{o}) b) 360/90 = 4^{o}

5) slope = 8/6 or 4/3 and the midpoint is (-2, 3)

6)





7) 5x - 16^{o} = 2x + 20^{o} , so x =12 ; obtuse angle = 136^{o}

8) 5x + 18 + 2x – 20 = 180, so x = 26^{o}, obtuse angle = 148^{o}