Geometry Benchmark Test #2 Practice

(Geometry Standard 16)

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

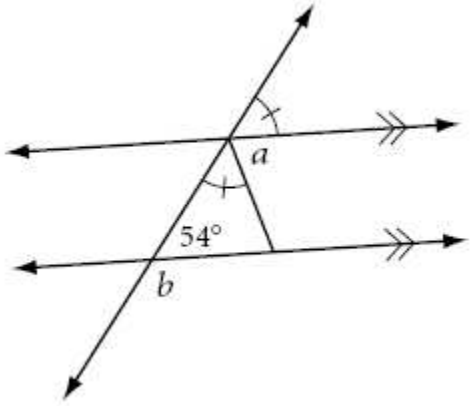
a) The perpendicular bisector of a segment $\overline{AM}$.
b) The bisector of an obtuse angle CAT .
c) The altitude from the vertex of the right angle in a right triangle BET.
d) An equilateral triangle and one of its medians.

(Geometry Standard 6)

2) Two sides of a triangle are 10 cm and 14 cm. What are three possible lengths of a third side?

(Geometry Standards 7 & 12)

3) Find the measure of ***a*** and ***b*** in the figure at the right.



4) Find the measure of a) an interior and b) an exterior angle of a regular 40-gon.

(Geometry Standard 17)

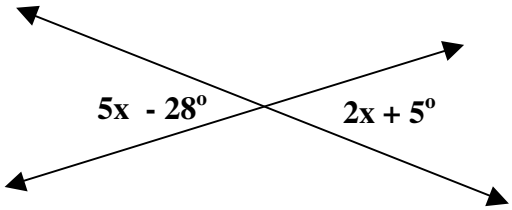
5) Find the slope and midpoint of $\overline{AB}$ if A(10, -4) and B(6, 7) .

6) Draw the graphs of a) $y = \frac{5}{4}x + 2$. b) $y = -2x + 5$ c) $y = -4$ d) $x = -4$

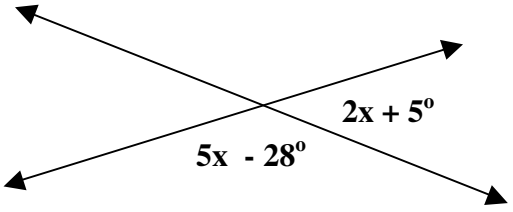
(Geometry Standard 13)

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

7)



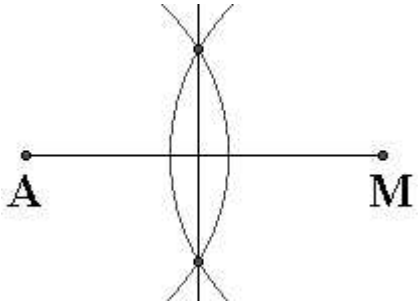
8)



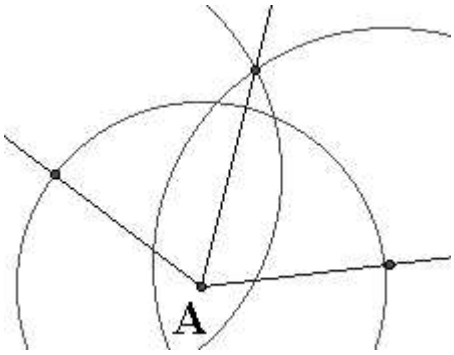
Answers provided below:

Answers:

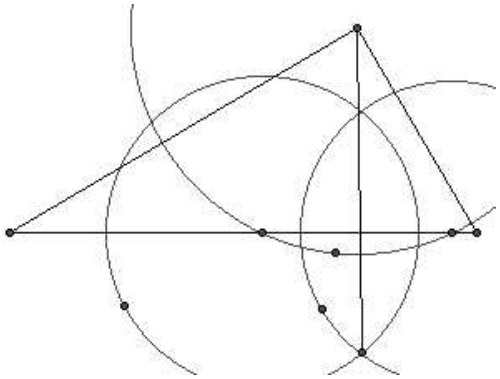
1) a)



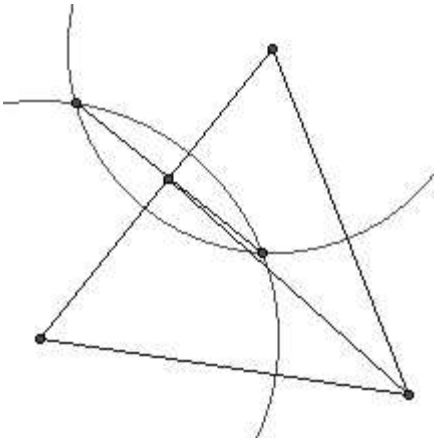
b)



c)



d)



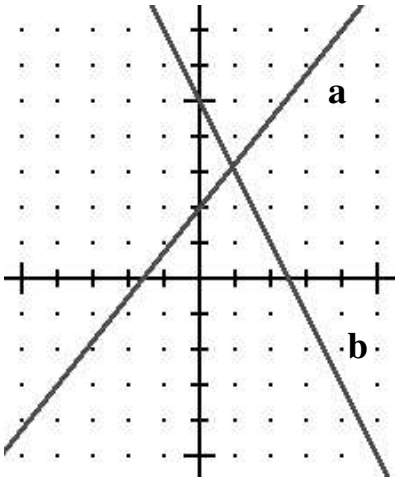
2) The third side has to be between 4cm and 24cm…. Some examples might be 5, 8, 20cm.

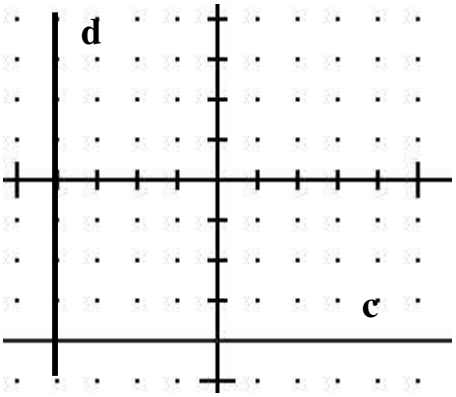
3) a = 72 and b = 126 degrees

4) a) 171 (the supplement of 9) b) 360/40 = 9

5) slope = -11/4 and the midpoint is (8, 1.5)

6)





7) $5x - 28^o = 2x + 5^o$, so x =11 ; obtuse angle = 153^o

8) x = 29^o, obtuse angle = 117^o