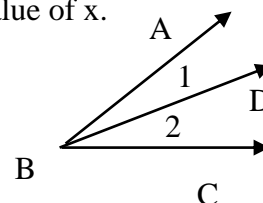


## HGeo Chapter 1 BI Online Review

- know the undefined terms and why they are undefined
- be able to define terms such as postulate, theorem, transformation, angle, isometry, midpoint, etc...AND know how to identify lines, planes, rays, midpoints, bisectors, etc...

1.  $\overline{BD}$  bisects  $\angle ABC$  and  $m\angle ABD = 47$  and  $m\angle 2 = 2x + 3$ . Find the value of  $x$ .

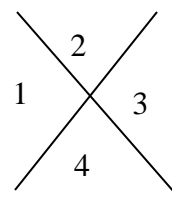


2.  $DF = 80$ ,  $DE = 3x - 2$ ,  $EF = 7x + 5$ . Find the length of  $DE$ .



3. Angles 1 and 2 form a linear pair. Draw this. If  $m\angle 1 = 6x + 1$  and  $m\angle 2 = 4x + 12$ , find  $m\angle 1$ .

4. If  $m\angle 2 = 3x - 5$  and  $m\angle 4 = 2x + 1$ , find  $m\angle 1$ . BECAREFUL!!



5. Find the distance between  $(3, -1)$  and  $(2, 8)$ .

6. The midpoint of  $AB$  is at  $M(3, -2)$  and with  $A(6, -9)$ . Find point  $B$ .

7. Find the midpoint of  $AB$  where  $A(-4, -10)$  and  $B(5, 13)$ .

8. The midpoint of  $AB$  is at  $(-3, 2)$ . If  $B$  is at  $(5, 8)$  find where  $A$  is.

9. Suppose you had 12 segments each 2 units long. What is the maximum area of a rectangle you can make with these pieces? (Use a guess and check method.)

Answers:

1.  $x = 22$       2.  $x = 7.7$ ,  $DE = 21.1$       3.  $x = 16.7$       4.  $x = 6$ , angle 1 = 167

5.  $\sqrt{82}$       6.  $(0, 5)$       7.  $(1/2, 3/2)$       8.  $(-11, -4)$

9. 36 sq units