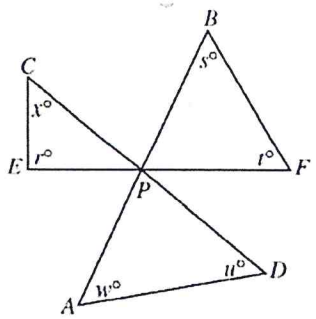
1. In the figure above, $\overline{AB}$, $\overline{CD}$, and $\overline{EF}$ intersect at P. If $r = 90$, $s = 50$, $t = 60$, $u = 45$, and $w = 50$, what is the value of x ?

(A) 45
(B) 50
(C) 65
(D) 75
(E) It cannot be determined from the information given.



Note: Figure not drawn to scale.

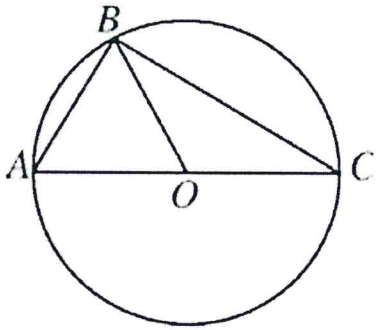
HON ALG 2 BELLWORK WED. JAN 18, 2017

2. Each of the following is equivalent to $\frac{a}{b}(bc + k)$ EXCEPT

(A) $a\left(\frac{c + k}{b}\right)$
(B) $a\left(c + \frac{k}{b}\right)$
(C) $\frac{a}{b}(k + bc)$
(D) $ac + \frac{ak}{b}$
(E) $\frac{abc + ak}{b}$

3. In the figure above, triangle ABC is inscribed in the circle with center O and diameter $\overline{AC}$. If $AB = AO$, what is the degree measure of $\angle ABO$?

(A) 15°
(B) 30°
(C) 45°
(D) 60°
(E) 90°



All of Kay's brothers can swim.

4. If the statement above is true, which of the following must also be true?

(A) If Fred cannot swim, then he is not Kay's brother.
(B) If Dave can swim, then he is not Kay's brother.
(C) If Walt can swim, then he is Kay's brother.
(D) If Pete is Kay's brother, then he cannot swim.
(E) If Mark is not Kay's brother, then he cannot swim.

5. The average (arithmetic mean) of t and y is 15, and the average of w and x is 15. What is the average of t, w, x, and y?

(A) 7.5
(B) 15
(C) 22.5
(D) 30
(E) 60

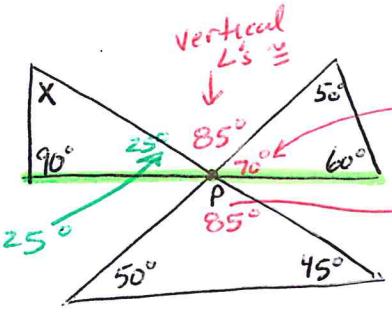
4, 11, 18, . . .

6. In the sequence above, the first term is 4 and each term after the first is 7 more than the previous term. What is the 12th term of the sequence?

(A) 77
(B) 81
(C) 84
(D) 86
(E) 92

HON ALG 2 BELLWORK Answers WED 1-18-17

(1)



$180-50-60=70°$

$180-50-45=85°$

$180-(70+85)=25°$

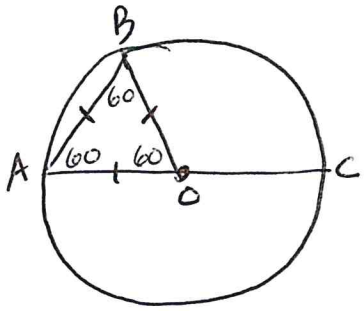
$X=180-90-25$

$X=65°$

C

(2) A if you distribute the b → $a\left(\frac{bc+k}{b}\right)=a\left(c+\frac{k}{b}\right)$

(3)



Given: $AB=AO$

since both $\overline{OB}$ and $\overline{OA}$ are radii they are ≅

ΔAOB is equilateral and all three of it's angles are 60°

$\therefore \angle ABO=60°$

D

(4) A if Fred were Kay's brother he would be able to swim

(5) $\frac{t+y}{2}=15 \rightarrow t+y=30$

$\frac{w+x}{2}=15 \rightarrow w+x=30$

$\rightarrow t+y+w+x=60$

B

$AVG=\frac{t+y+w+x}{4}=\frac{60}{4}=15$

(6) 12th term $=4+7(11)=81$

2nd term $=4+7$

3rd term $=4+7+7$

4th term $=4+7+7+7$

→ each term has the 1ST term (4) plus a bunch of 7's. The # of 7's is one less than the term #.

B