Activity 7 student grader... write correct or incorrect..
If incorrect say why.

1. find x

Suppose $m\angle 3 = 5x + 11$ and $m\angle 5 = 16x + 1$.

\[
5x + 11 + 16x + 1 = 180 \\
21x + 12 = 180 \\
21x = 192 \\
x = 9.14
\]

2.

a. Suppose $m\angle 5 = 130^\circ$. What is $m\angle 3$?

b. Suppose $m\angle 8 = 141^\circ$. What is $m\angle 4$?

a. $130 + ? = 180$

same-side interior are supplementary

$\angle 3 = 50$

b. angle 8 and 4 are congruent b/c they are corresponding

$141$
3. Suppose that angles $\angle 1$ and $\angle 2$ are same-side interior angles. 

If $m\angle 1 = 7x - 4$ and $m\angle 2 = 20x - 5$. What is $x$?

\[
7x - 4 = 20x - 5 \\
-4 = 13x - 5 \\
1 = 13x \\
\underline{x = .07}
\]

4. Identify the relationship for angles 6 and 2

Angles 6 and 2 are alternate interior angles. Therefore they are equal.

5. Identify the relationship of these two angles.

They are same-side interior angles.
6. solve for x.

\[ 3x = 75 \]
\[ x = 25 \]

7. solve for x.

\[ m\angle 1 = 6x - 5, \]
\[ m\angle 7 = 115^\circ \]
\[ 6x - 5 = 115 \]
\[ 6x = 110 \]
\[ x = 18.33 \]

8. Find angle x.

angle x and angle marked 65 are corresponding and that relationship is congruent.

\[ x = 65 \]
9. find x

\[ 6x + 104 = 180 \]
\[ 6x = 96 \]
\[ x = 16 \]

10. Find y.

angle y and angle marked 35
are corresponding and congruent
\[ y = 35 \]

11. find angle 2

12. Find y.

120 and x are corresponding and equal. angle x and y are also corresponding and equal
\[ y = 120 \]
13. ACT example question.  Find the measure of angle 2.

If $m \angle 3 = 3x$, and $m \angle 4 = 7x$.

A. 12  
B. 18  
C. 112  
D. 126

14. ACT example question. If $w = 63^\circ$, find measure of angle y

A. 63  
B. 90  
C. 117  
D. 163