

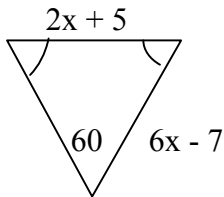
Honors Geometry Chapter 5 BI – Review

1. Know the definitions of scalene, isosceles, and equilateral triangles.
2. Know all the ways to prove triangles congruent: SSS, SAS, ASA, AAS, HL, HA, LL, LA
3. Know how to find the new coordinates of a triangle if reflected across the x or y-axis.
4. Are re triangles $A(2, 3)$, $B(4, 5)$, $C(6, 10)$ and $D(4, 4)$, $E(6, 6)$, $F(8, 11)$ congruent? Describe the transformation that supports your answer.
5. Know how to prove something using:
 - a) Isosceles triangle theorem ****study notes, workbook and proofs we did in class**
 - b) Using CPCTC
 - c) Coordinate proofs
6. Review parallel line problems and external angle of a triangle = to sum of 2 remote interior

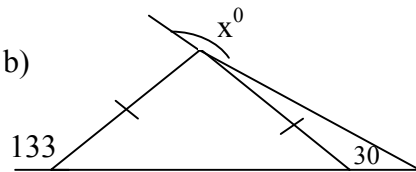
Sample Problems:

7. Find x:

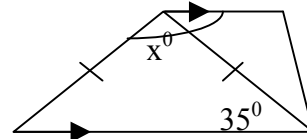
a)



b)

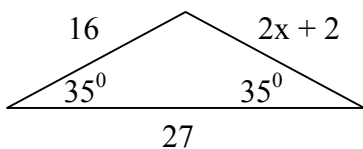


c)

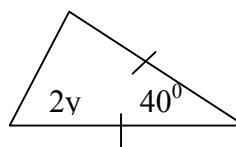


8. Find x and or y:

a)

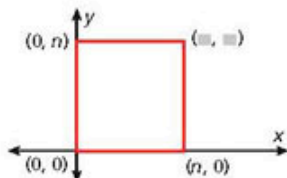


b)

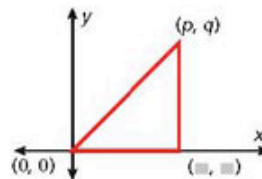


9. Find the missing coordinates for each figure.

a.



b.



10. Write a coordinate proof:

Given: Rectangle $PQRS$ has coordinates $P(0, 2)$, $Q(3, 2)$, $R(3, 0)$, and $S(0, 0)$.
 \overline{PR} and \overline{QS} intersect at $T(1.5, 1)$.

Prove: The area of $\triangle RST$ is $\frac{1}{4}$ of the area of the rectangle.

Answers:

4. Yes, $T:(x,y) \rightarrow (x + 2, y + 1)$

7. a) 3 b) 163 c) 145

8. a) $x = 7$ b) $y = 35$

9. a) (n, n) b) $(p, 0)$

10. The area of the rectangle is $A = lw = 3(2) = 6$ sq units. For triangle RST , the base is 3 units and the height is 1 unit.

Thus the area of triangle $RST = \frac{1}{2} (3)(1) = 1.5$ sq units. Since $\frac{1}{4} (6) = 1.5$, the area of triangle RST is $\frac{1}{4}$ the area of the rectangle.