FSAP 9 Name:_____

Summary

Show all work. Process matters.

1. Evaluate using the rules of order of operations.

   (a) $3 - 4(2 - 3) + 2(3)^2$

   (b) $\dfrac{2-3}{3} - 3\left(\dfrac{1-4}{2}\right)$

2. Explain why $-5^2 \neq (-5)^2$.

3. Simplify the following square roots.

   (a) $\sqrt{32}$

   (b) $\sqrt{108}$

   (c) $\sqrt{300}$

4. Given a triangle with hypotenuse of length 10 and one leg of length 6, what is the length of the other leg?

5. Given $A(3, 1)$ and $B(-2, 0)$, what is the length of line segment $\overline{AB}$?

6. If a line has slope -2 and goes through the point $A(0, 3)$ what is the equation of this line?

7. How can you tell from the equations of two lines that they are parallel?

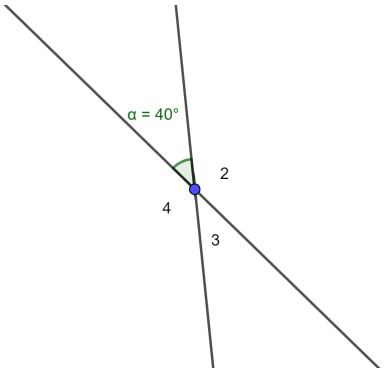
8. Let $A(1, 2)$ and $B(-3, -1)$. What is the slope defined by these two points?

9. What are the four isometries? Describe each of them.

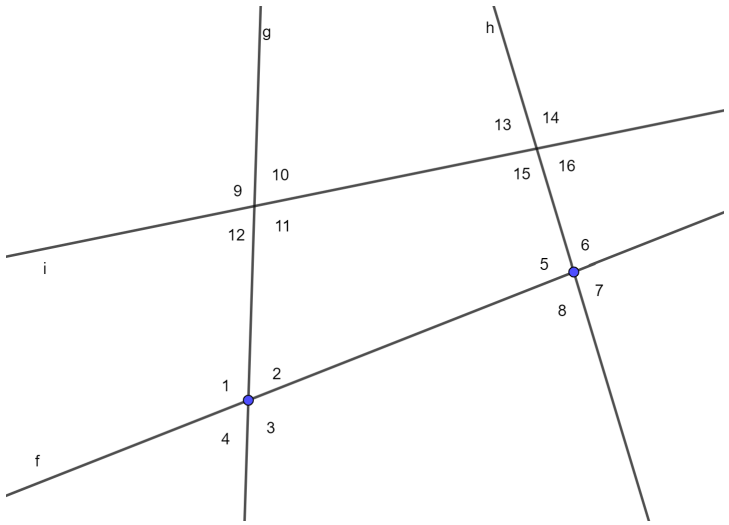
10. What is the midpoint of the line segment determined by $A(1, 2)$ and $B(-3, -1)$.

11. Draw a pentagon (5-gon) where two sides are congruent and two angles are congruent. Use proper notation to mark congruency.

12. In the figure below determine the measures of angles 2-4, and explain how you determined their measures.



13. In the figure below give one example of same side interior angles, alternate interior angles, and corresponding angles.



14. Find the measure of $\angle A$ in the figure below.