

FSAP 9
Summary

Name:_____

Show all work. Process matters.

1. Evaluate using the rules of order of operations.

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

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

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. Let $2x - 3y = 6$. What are the x and y intercepts for this line?
10. Where do the following two lines meet? $y = 2x - 3$ and $y = -x + 5$.
11. How can you determine whether three points are on the same line?
12. If a line has slope 3, what is the line perpendicular to it that goes through the point $A(0, -1)$?

13. Let $f(x) = x^2 - 3$

(a) Evaluate $f(3)$.

(b) Evaluate $f(-2)$.

(c) What does $f(3)$ mean?

(d) Find x so that $f(x) = 15$

14. Describe how parabolas (like $y = x^2$) are different than lines.