Name:_____ Period:_____

0.7 P7 and Review

Find the midpoint and distance between the points.

1. $(4\sqrt{2}, \sqrt{27})$ & $(-\sqrt{8}, 7\sqrt{3})$

2. The origin and the midpoint of (-2, 7) and (14, 3)

3. Given the endpoint A(-12, 24) and midpoint M(27, -7), find the other endpoint B. Then, find the length of AB.

4. Find a point that is $\sqrt{13}$ units away from (-3, 1).

5. Find the area of the circle where the endpoints of a diameter are (-11, 4) and (2, 8).

6. Find an expression that represents the other endpoint of a line segment with endpoint (a,b) and midpoint (m,n).

7. Given the points A(48x, -6y) and B(-12x, 9y), find the points that divide segment AB into 6 equal parts.

8. Prove or disprove that the points (-10, 2), (0, 9) and (-7, -1) are the vertices of an isosceles triangle. Then determine if it is acute, obtuse or right.

Determine which quadrant(s) and/or axes point (x, y) can lie on given the conditions.

9. $xy > 0$ 10. $xy = 0$ 11. $x > 0, y = 7$ 12. (-x, -y) is in quadrant 2

13. Simplify.

$$\frac{\sqrt{2a}-\frac{1}{\sqrt{2b}}}{\sqrt{ab}}$$

14. Factor.

a. $6x(x-1)^{5/2}-16x^3(x-1)^{-3/2}$ b. $4x^5-6x^4-4x^3$

15. Combine.

$$\frac{3x}{2x^2+5x-7}-\frac{4}{x-1}$$

16. Simplify each expression.

a) $\sqrt{\frac{45a^4}{b^5}}$ b) $\frac{\sqrt[4]{32a^7b^{10}c^5}}{\sqrt[4]{2a^3b^2}}$ c) $(x+y^{-1})^{-1}$ d) $\sqrt[3]{\sqrt{64}}$

17. Describe and correct the error.

a) $\sqrt{2^2+3^3}=\sqrt{2+3}$ b) $(4x+12)^2=4(x+3)^2$ c) $10(3\cdot 4)=30(40)$

18) Rationalize each denominator.

a) $\frac{2}{\sqrt[3]{18}}$ b) $\frac{24}{1-\sqrt{5}}$