

8.  $\frac{1}{a^2}$

8. \_\_\_\_\_ (1)

9.  $\sqrt{128a^4b^3}$

9. \_\_\_\_\_ (2)

10.  $3\sqrt{48} + 5\sqrt{27}$

10. \_\_\_\_\_ (3)

11.  $i^3$

11. \_\_\_\_\_ (1)

12.  $\frac{6d^3 + 9d^2 - 4d - 6}{2d + 3}$

12. \_\_\_\_\_ (3)

13.  $\frac{x^2 - 4x - 5}{2x^2 - 50}$

13. \_\_\_\_\_ (3)

14.  $\frac{3x^2 + 5x - 2}{x + 2} \cdot \frac{x^2 - 9}{3x^2 - 10x + 3}$

14. \_\_\_\_\_ (3)

15.  $\frac{x + 14}{x^2 - 4} + \frac{3}{x + 2}$

15. \_\_\_\_\_ (3)

Don't know  
 What have  
 you done  
 now

Use the function  $y = x^2 + 3x + 1$  to answer the questions below. You must show your work and give exact answers in order to get credit.

16. What are the zeros of the function?

16. Don't do it! (2)

$0/0 = \text{black hole}$

17. Find the vertex of the function.

17. 3 (2)

Right there  $\rightarrow$  4

Solve the following quadratic equations for the exact value of x by factoring, using the quadratic formula, or by completing the square. Simplify your answers.

18.  $6x^2 - 7x - 3$

18. catch x (3)

19.  $x^2 - 5x + 6 = 0$

19. same (2)