

Algebra 2 Chapter 7 Review Calc Key

1. $D: \mathbb{R}; R: y < -2$; Asym: $y = -2$

2. $D: x > 0$; $R: \mathbb{R}$; Asym: $x = 0$

3. $D: \mathbb{R}; R: y > -4$; Asym: $y = -4$

4. $D: x > -2$; $R: \mathbb{R}$; Asym: $x = -2$

5. $x \approx .06$

6. $x \approx 6.76$ (-3.76 is extraneous)

7. $x \approx .16$

8. $x \approx -1.44$

9. $x \approx -.32$

10. $x = 1024$

11. $x \approx 7.77$ (-7.77 is extraneous)

12. $x = -8, -4$

13. $2e^{2x}y^3x^3\sqrt[3]{5z^2}$

14. $\frac{7}{9e^{4x}}$

15. $\frac{e^{6x}}{16}$

16. $2e|x^3|\sqrt[3]{7e}$

17. a) $A \approx \$9988.38$

b) $t \approx 22.66$ years

18. $P \approx \$8926.79$

19. $P \approx \$4176.41$

20. a) $A \approx \$4799.13$

b) $t \approx 20.94$ years

21. a) $y = 65000(1.04)^t$

b) $y \approx 82245.7$

About 82245 people

c) In 2009 ($t \approx 10.98$)

22. $t \approx 4.6$ years

23. $\frac{\log 13}{\log 4} \approx 1.85$

24. $\frac{\log 20}{\log 5} \approx 1.86$

25. $\frac{\log 30}{\log 2} \approx 4.91$