

Algebra 2
Chapter 3 Review KEY

Non Calculator

1. 2^7
2. 2^9
3. 192
4. 64
5. $\frac{1}{81}$

6. 1

7. 9

8. $\frac{1}{216}$

9. $\frac{1}{8}$

10. 7

11. 8

12. 3

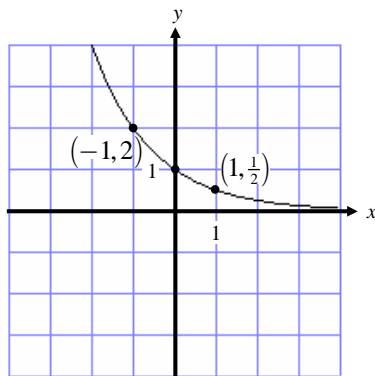
13. 1

14. 5

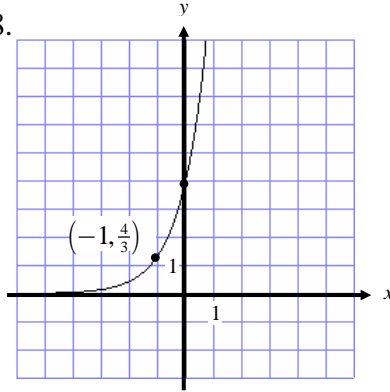
15. 81

16. 16

17.



18.



19. $y = 1300(1.05)^x$

20. $y = 34000(.82)^x$

Calculator

1. a) $y = 327,000(1.06)^x$
 $x = \text{years since 2000}$

b) 1995: 244,353
2010: 585,607

2. a) $y = 60(.925)^x$
 $x = \text{hours since taking medication}$

b) 27.5 gm

c) 8.89 hours

Ex. Intersect the exponential decay equation with the line $y = 30$

d) $y = 60\left(\frac{1}{2}\right)^{\frac{x}{8.89}}$

3. 1.141

4. $y = 3985(1.141)^x$

5. \$28,821

6. \$2,061

7. 2006

8. \$1657.41

9. 13.89 years

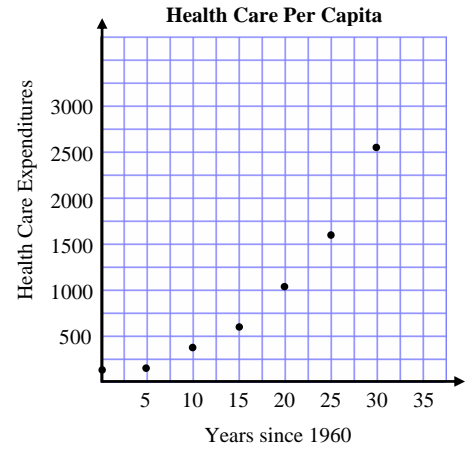
10. \$1716.81

11. b) $y = 100(.970)^x$

c) 22.76 years

d) $y = 100\left(\frac{1}{2}\right)^{\frac{x}{22.76}}$

12. a)



12. b)

$y = 120.277(1.111)^x$

c)

$y = 133.005(1.106)^x$

d) 1957: \$98

2003: \$10,124