

Answers to D-Test Problems

1. $\frac{a^3}{4b}$

2. a. $x = 3$

b. $x = \frac{7}{4}$

c. $x = 4, -4, 6, -6$

d. $-\frac{1}{3} < x < 1$

e. $x = 5$

f. $-\frac{2}{3} \leq x \leq \frac{3}{2}$

g. $x \leq 2$

3. $4\sqrt{5}$

4. a. $g[f(x)] = \frac{3+3x}{x+2}, x \geq -1$

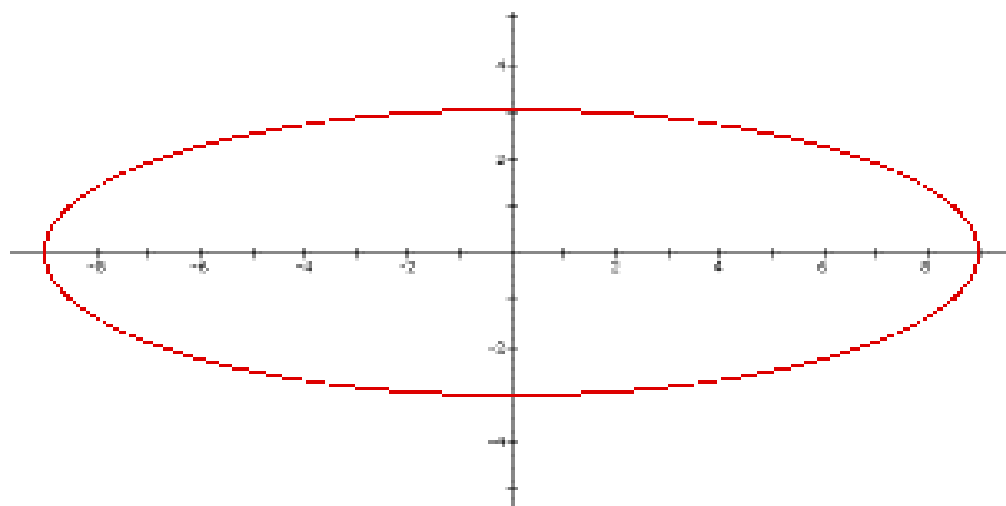
b. $\{y : 0 \leq y < 3\}$

c. $f^{-1}(x) = x^2 - 1$

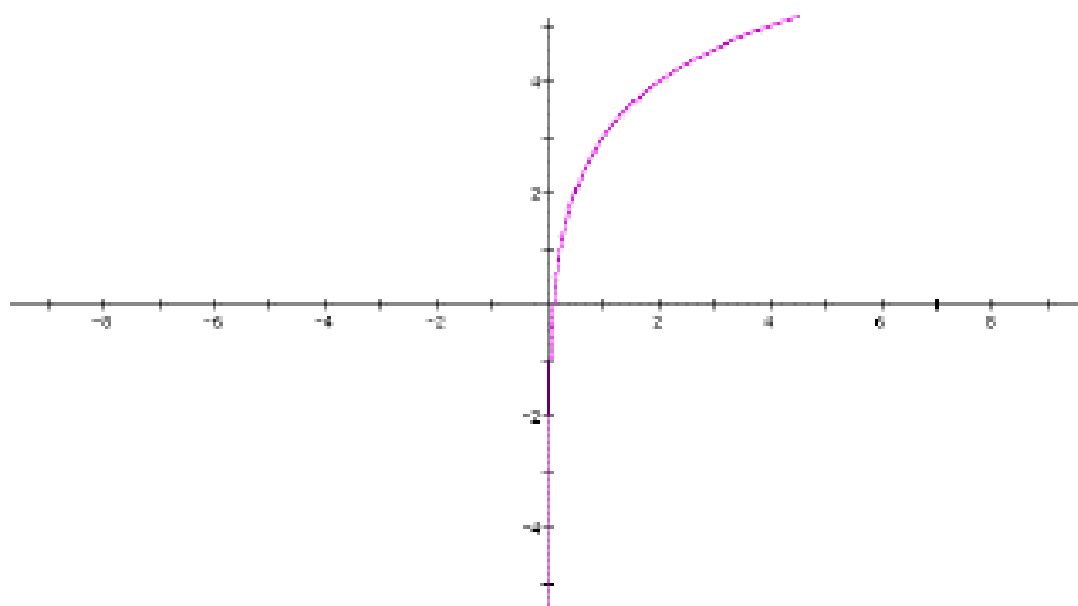
domain of f^{-1} is $\{x : x \geq 0\}$

g^{-1} does not exist

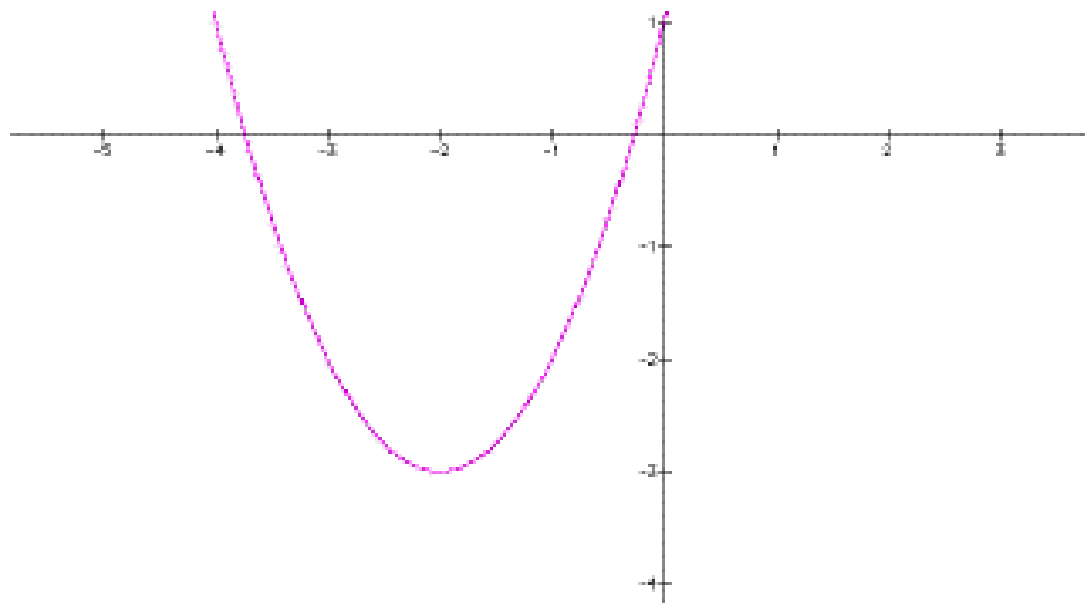
5. a.



b.



c.



6. 0.756

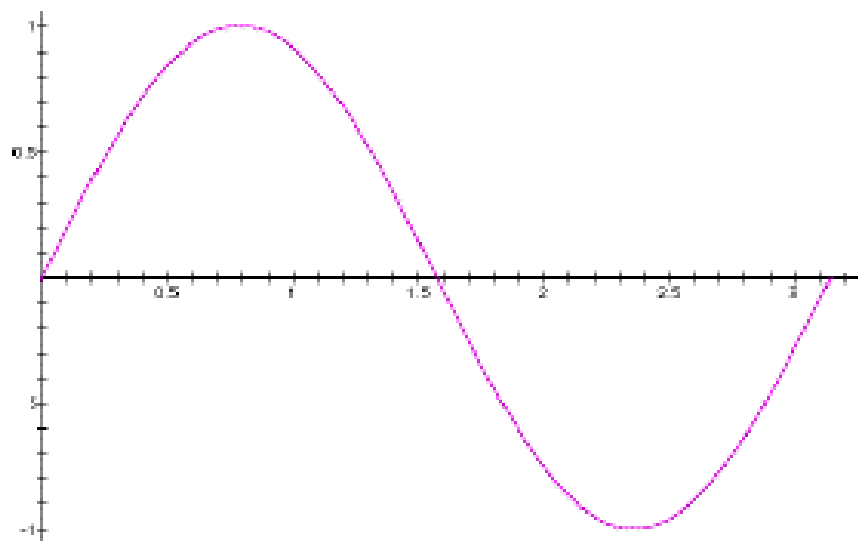
7. center (3,-4), $r = 5$

8. 1

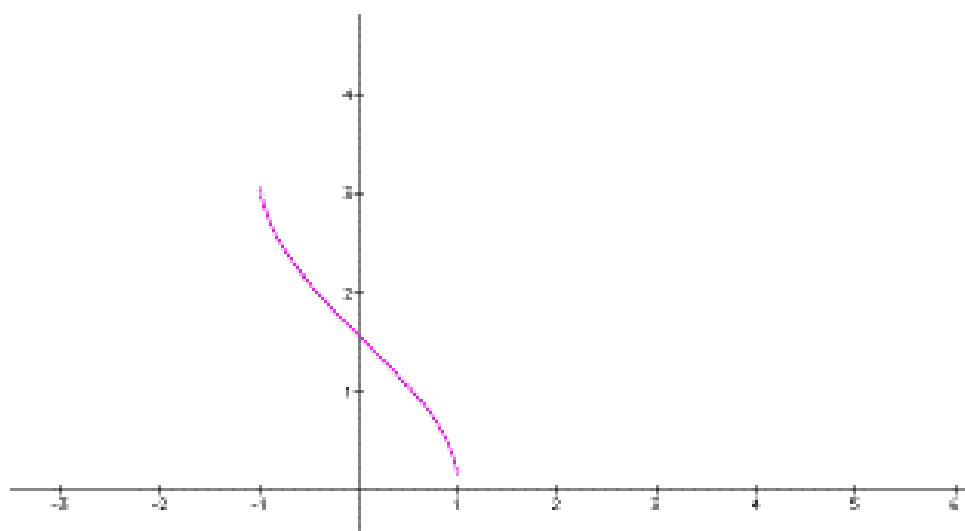
9. $\frac{-7}{\sqrt{53}}$

10. 0

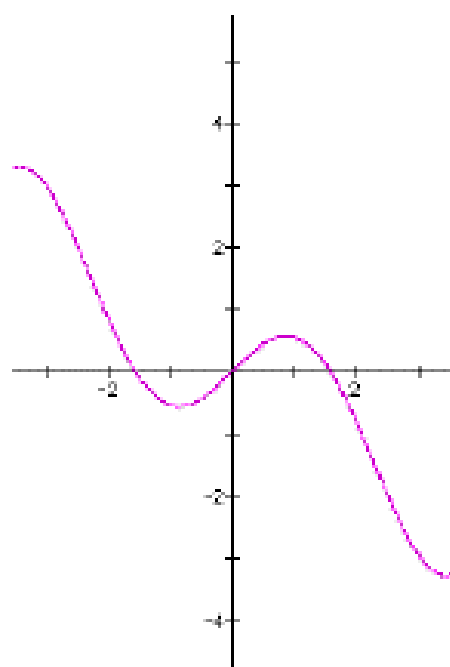
11.a.



b.



c.



12. $\sec \theta$

13. 60 feet

14. a. $\sqrt{13}$

b. $9 - 7i$

c. $\frac{3 - 11i}{10}$

15. $r = 8, \theta = \frac{\pi}{2} \pm k2\pi$

16. $n = 12$