

REVIEW: Square Root, Absolute Value, Complex

1 a. $-15 \leq x \leq 1$

b. $x < -2$ or $x > 3$

c. $-13 < x < -7$ or $-5 < x < 1$

d. $1.5 \leq x \leq 2.75$ or $-1.75 \leq x \leq -0.5$

2 a. $x = 9$ (reject $x = 1$)

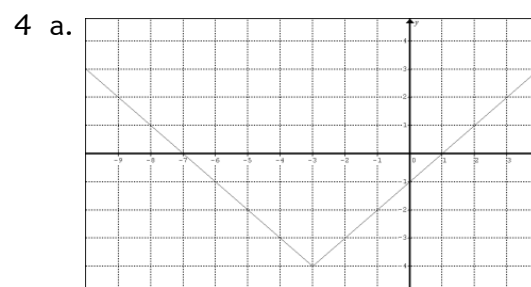
b. $x = 2, 38$

c. $x = 0$ (reject $x = 9/16$)

3 a. $y = -3 \pm \sqrt{x} - 5$

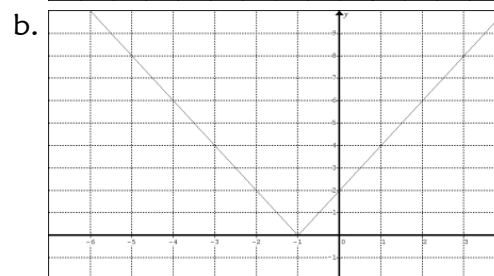
b. $y = x^2 + 10x + 23; x \geq -5$

c. $y = \pm \sqrt{\frac{x+3}{-4}}$



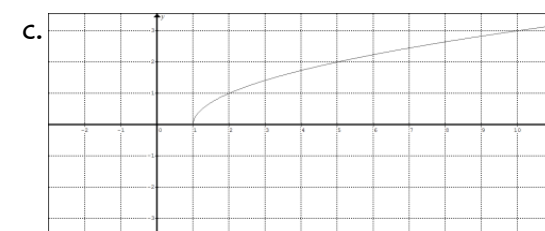
Domain: $x \in \mathbb{R}$

Range: $y \geq -4$



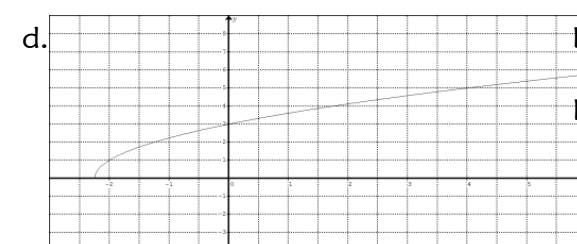
Domain: $x \in \mathbb{R}$

Range: $y \geq 0$



Domain: $x \geq 1$

Range: $y \geq 0$



Domain: $x \geq -2.5$

Range: $y \geq 0$

5. $y = \frac{1}{2}|x| - 3$

6 a. $x = -2 \pm i\sqrt{3}$ b. $x = \pm\sqrt{6}, \pm 2i\sqrt{2}$

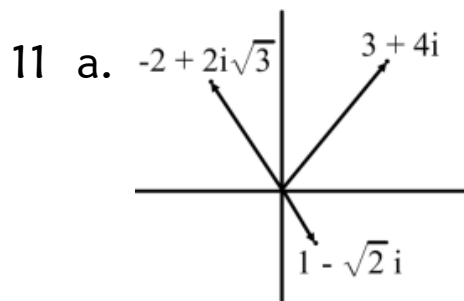
7 a. $3i$ b. $2i$ c. $-6 + 3i$

8 a. $\sqrt{37}$ b. $4 - 10i$ c. $-27 - 14i$

d. $\frac{21-22i}{25}$ e. $\frac{-259+888i}{625}$

9 a. I b. III c. II

10 a. $-7.247 + 27.046 i$ b. $1.237 - 1.237 i$



b. i. $76\,443 + 16\,123 i$

ii. $1 + 15.6 i$

iii. $-2\,097\,152 - 3\,632\,374 i$