

EQUATIONS & INEQUALITIES

- $(-\infty, -4) \cup (1, \infty)$
 - $(\frac{5}{2}, \frac{11}{2}]$
 - $(-\infty, 0] \cup [4, \infty)$
 - $x = -4, -\frac{2}{5}$
 - $(-\infty, -2)$
 - $(-\infty, -1) \cup (1, 2)$
 - $(-\frac{17}{5}, 3)$

ANALYTIC GEOMETRY

- $(x + 7)^2 + (y - 2)^2 = 7^2$
- Center is $(3, -7)$ and the radius is $5\sqrt{2}$
- Neither. They're both the same distance of $2\sqrt{5}$ to $(3, 2)$.
- $5\sqrt{2}$
- $(x + 4)^2 + (y + \frac{9}{2})^2 = (\frac{13}{2})^2$.
 - $\frac{169\pi}{4}$
 - One possible answer: $(-4, 2), (-10.5, -4.5), (2.5, -4.5), (-4, -11)$
 - No to both questions.

FUNCTIONS

- 50
 - $\frac{1586}{49}$
 - $2x^4 - 7x^2 + 11$
 - $24x - 42$
 - $2x^2 + 7x + 11$
 - $\frac{2 - 7x + 11x^2}{x^2}$

- (g) $4x + 2h - 7$
8. (a) x -intercept is $-\frac{5}{2}$ and the y -intercept is $-\frac{5}{9}$
(b) $(-\infty, -3) \cup (-3, 3) \cup (3, \infty)$
(c) $(-3, -\frac{5}{2}] \cup [3, \infty)$
9. (a) $(-\infty, \infty)$
(b) $(-\infty, -4) \cup (0, 7)$
(c) $(-4, 0) \cup (7, \infty)$
(d) $(-\infty, -4] \cup [0, 7]$
(e) $[-4, 0] \cup [7, \infty)$
10. (a) $-3x^3 + 7x$
(b) $2x^4 - 6x^2 - 10$
11. (a) $\frac{x^2}{x^2 + 2}$
(b) $x = -3$
(c) $-\frac{1}{2x + 1}$
(d) $\frac{2}{(x + 1)(x + h + 1)}$