

Algebra 2 CHAPTER 9 TEST (OPEN BOOK, OPEN NOTES)

(1) DO ALL WORK ON A SEPARATE SHEET OF PAPER.

(2) ENTER ANSWERS ONLINE.

(3) YOU HAVE MAX 2 HOURS FOR TEST

1. Find the distance between the points $(-1, 4)$ and $(3, 1)$.

2. Find an equation of the perpendicular bisector of the segment connecting the points $(-1, 2)$ and $(-6, -5)$.

3. Two friends are planning to meet at a restaurant to have supper together. Sam must drive 7 miles East and 3 miles South to reach the restaurant while Pat must drive 2 miles West and 9 miles North to reach the restaurant.
 - a. If the restaurant is at the origin of a coordinate plane, explain how to find coordinates for Sam and Pat before they start driving.
 - b. Find the distance between Sam and Pat before they start driving.
 - c. Who started farther from the restaurant? Explain.

- _____ 4. Write the standard form of the equation of the parabola with its vertex at $(0, 0)$ and directrix $y = 5$.
 - a. $x = 5y^2$
 - b. $y = -20x^2$
 - c. $x^2 = -20y$
 - d. $y^2 = -\frac{1}{20}x$

5. Write the standard form of the equation of the parabola with its vertex at $(0, 0)$ and focus at $(0, -4)$.

6. Identify the focus and directrix of the parabola given by $y^2 = -4x$.

- _____ 7. Sketch the graph of $y+3 = (x+2)^2$.
 - a.
 - c.