MATH-95 Intermediate Algebra Quiz #1 Practice

NOTE: Show your work and circle or highlight your final answer.

1. What is the equation of the line in slope-intercept form containing:
   a. a y-intercept of 6 with a slope of $-\frac{3}{2}$
   b. (3, 6) with slope 2
   c. (-2, 7) and (-3, 8)
   d. y-intercept at 4 and perpendicular to $y = -\frac{3}{2}x - 4$
   e. y-intercept at 3 and parallel to $y = -\frac{3}{2}x - 4$

2. a. Sandra drove 102.3 mi. in 1.5 hr. What was her average rate in miles per hour?
   b. A long distance telephone call lasting 26 min. costs $2.86. What is the rate in dollars per minute?
   c. A 10.5 oz. can of soup costs $0.79. What is the unit price in cents per ounce? (Round to the nearest tenth.)

3. Find the $x$- and $y$-intercepts for the following lines:
   a. $5x + 2y = 10$
   b. $3x - 4y = 12$
       
       $y$-int.:
       $x$-int.:
       $y$-int.:
       $x$-int.:  

4. Find the slope of the line through the two points:
   a. $(-3, 3)$ and $(2, 4)$
   b. $(6, -3)$ and $(4, -2)$
5. Find the slope of the line and sketch the graph:
   a. \(5x + 2y = 10\)
   \[m = \]
   b. \(3x - 4y = 12\)
   \[m = \]

6. State whether the following relations are functions:
   a. \(\{(1, 5), (3, 6), (4, 8)\}\)
   b. \(\{(6, 4), (-4, -6), (6, -4)\}\)

7. State the domain and range of the following relations:
   a. \(\{(3, 4), (-1, 6), (7, 4)\}\)
   b. \(\{(-3, 4), (4, -4), (-1, -4)\}\)
   Domain:
   Range:
   Domain:
   Range:

8. State the domain and range of the following relations:
   a. 
   Domain:
   Range:
   b. 
   Domain:
   Range:
   c. 
   Domain:
   Range:
   d. 
   Domain:
   Range: