MATH-95 Intermediate Algebra Quiz #2 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. (-2, 7) and (3, -8)
   b. (6, 3) with slope $-\frac{2}{3}$

2. Simplify where possible.
   a. $\frac{-10x^{-5}y^6z^{-1}}{35x^{-2}y^{-2}z}$
   b. $125^{-\frac{5}{3}}$

3. Solve:
   a. $x^2 = 25$
   b. $81x^2 - 4 = 0$
   c. $49x^2 + 16 = 0$
   d. $4(x + 2)^2 - 252 = 0$

4. Use completing the square:
   a. $x^2 - 8x + 9 = 0$
   b. $x^2 + 4x = -13$
5. Solve:
   a. \(3x^2 - 6x - 2 = 0\)
   b. \(x^2 + 8x + 20 = 0\)
   c. \(2x^2 + 5x - 3 = 0\)
   d. \(x^2 + 17 = -2x\)

6. Solve for the specified variable:
   a. \(F = \frac{Gm_1m_2}{r^2};\) for \(r\)
   b. \(T = 2\pi \sqrt{\frac{l}{g}};\) for \(g\)
   c. \(A = P(1 + r)^2;\) for \(r\)
   d. \(A = 2\pi r^2 + 2\pi rh;\) for \(r\)

7. Graph the following:
   a. \(y = 2x^2 - 2x\)
   b. \(y = -x^2 - 4x - 3\)