Problems

1) Factor completely.
   a) \(25 - y^2\)
   b) \(a^3 + 27\)
   c) \(a^2 + 25\)
   d) \(x^3 - \frac{1}{64}\)
   e) \(h^3 + 4h\)
   f) \(5p^4q - 20q^3\)
   g) \(-2z - 6 + 4z^2\)
   h) \(2x^5 - 10x^4 + 6x^3 - 30x^2\)

2) Solve \(x^2 - 2x - 15 = 0\)

3) Solve \(3(x - 1)(x + 5)(2x - 9) = 0\)

4) Find the x-intercept and the y-intercept of \(f(x) = -4x^2 + 4\)

5) A garden has an area of 320 \(ft^2\). Its length is 4 \(ft\) more than its width. What are the dimensions of the garden? (Solve using a quadratic equation)