Math 102 Quiz 6 Solutions
March 2, 2012

1. Multiply, and collect any like terms:

(a)

$$(2m - 3)(-5m + 9) = -10m^2 + 18m + 15m - 27$$
$$= -10m^2 + 33m - 27$$

(b)

$$(a - 5)(a^2 - ab + 3) = a^3 - a^2b + 3a - 5a^2 + 5ab - 15$$

(There are no like terms here that you can collect)

2.

(a) $q = 11$, $q = -2$

(b) $z = 2$

3.

(a) $x = 0$, $x = 2$, $x = -2$

(b) $x = 1$, $x = -2$.

4.

(a) $z(z - 1)(z - 5)$

(b) $3ab(3b + 5a^2)$

(c) $m^2 + 4m + 9$ (can't be factored further)

5.

quotient: $x^2 - 2x + 4$

remainder: 40