Name: _____   Date: _____

Learning Goal 5.3	I can multiply and divide polynomials.

1. Expand the following products. Express your answer in simplest terms

a.	$(x + 3)(x + 5)$	b.	$(a + 3)(a - 4)$
c.	$(b - 6)(b + 2)$	d.	$(c - 9)(c - 3)$
e.	$(d + 12)(d + 3)$	f.	$(1 - f)(f + 5)$
g.	$(2 - g)(3 - g)$	h.	$(h - 1)(4 - h)$
i.	$(j + 3)^2$	j.	$(k - 2)^2$

2. Find the following quotients. Express you answer in simplest terms.

a.	$\dfrac{x^2 + 4x + 4}{x + 2}$	b.	$\dfrac{m^2 + 11m + 24}{m + 8}$
c.	$\dfrac{a^2 + 15a + 36}{a + 3}$	d.	$\dfrac{k^2 + 9k + 18}{k + 6}$
e.	$\dfrac{t^2 + 13t + 12}{t + 1}$	f.	$\dfrac{t^2 + 10t + 16}{t + 2}$
g.	$\dfrac{t^2 + 8t + 12}{t + 2}$	h.	$\dfrac{t^2 + 8t + 16}{t + 8}$
i.	$\dfrac{n^2 + 11n + 24}{n + 3}$	j.	$\dfrac{j^2 + 15j + 26}{j + 13}$

3. Factor the following polynomials. Express you answer in simplest terms.

k.	$x^2 + 4x + 4$	l.	$m^2 + 14m + 24$
m.	$a^2 + 12a + 36$	n.	$k^2 + 19k + 18$
o.	$t^2 + 8t + 12$	p.	$t^2 + 8t + 16$
q.	$t^2 + 7t + 12$	r.	$t^2 + 10t + 16$
s.	$n^2 + 14n + 24$	t.	$j^2 + 15j + 26$