M007 – Elementary Algebra
Practice Quiz 4 (4.5-4.7)

Note: This review sheet was created to correspond with the fourth quiz in M007. As such, this document is only to help you review the concepts presented in your text. Each instructor may have other specific problems you should review in order to be prepared for quizzes and/or exams in your section of the course.

Multiply each of the following. (Section 4.5, 4.6)

1. $-4x^3\left(x^2-3x+6\right)$
2. $(3-2x)(4+5x)$
3. $\left(4x^3+2\right)\left(4x^3-2\right)$
4. $(6y-5)^2$
5. $(3x-4)\left(2x^2+5x-3\right)$
6. $(2x-3)(4x+7)$
7. $(3x-5)^2$
8. $(3x+7y)(2x-4y)$
9. $(4x-9y)(2x-5y+8z)$

Add or Subtract, as indicated. (Section 4.6)

10. $(25x+27xy-30y)-(19x-16xy-23y)$
11. $(5a^5+6a^2)+(5a^5+5a^2)-(8a^5-7a^2)$

Perform the division. (Section 4.7)

12. $\dfrac{7m^3+11m^2-4m+4}{m+2}$

13. $(4x^3-22x^2+13x-15)\div(x-5)$

14. $\left(12x^5+9x^3-15x\right)\div 9x^2$

The Altitude of an object, in meters, is given by the polynomial $h+vt-4.9t^2$, where *h* is the height, in meters, at which the launch occurs, *v* is the initial upward speed (or velocity), in meters per second, and *t* is the number of seconds for which the object is airborne. (Section 4.6)

15. A golf ball is launched upward with an initial speed of 30 m/sec by a golfer atop the Washington Monument, which is 160m above the ground. How high above the ground will the ball be after 3 sec?