Worksheet #2 – Polynomials

College Placement Exam Prep

Correct Number of Answers on Placement Exam Pre-Test for Questions 32 – 37: \_\_\_\_\_\_\_\_\_\_

Directions: Complete the appropriate section of the worksheet. Show all work!

* If you answered 0, 1, or 2 questions correct, complete the problems in Section A of the worksheet.
* If you answered 3 or 4 questions correct, complete the problems in Section B of the worksheet.
* If you answered 5 or 6 questions correct, complete the problems in Section C of the worksheet.

**Section A**

*Perform the indicated operation. Simplify completely.*

1. $\left(2x^{2}+3x+4\right)-(x^{2}+x+2)$ 2. $\left(x^{2}-4x+5\right)+(-2x^{2}-4x+5)$

3. $6p(p+7)$ 4. $x(x^{2}+3x-1)$ 5. $(x-3)(x^{2}+2x-1)$

*Find the zeros of the function by factoring.*

6. $x^{2}+5x+6=0$ 7. $-x^{2}+4x+5=0$

8. $x^{2}+16=8x$ 9. $4x^{2}-12x+9=0$

**Section B**

*Perform the indicated operation. Simplify completely.*

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

3. $(3x-1)^{3}$ 4. $(x+2)(2x^{2}+2x-1)$ 5. $4x^{2}(3x^{2}+1)$

*Find the zeros of the function by factoring.*

6. $-x^{2}-6x-9=0$ 7. $2x^{2}+9x+4=0$

8. $x^{2}+x-20=0$ 9. $12x=9x^{2}+4$

**Section C**

*Perform the indicated operation. Simplify completely.*

1. $\left(7x^{3}+2x-1\right)+(8x^{2}-6+2x-x^{3})$ 2. $\left(12-11x-5x^{2}\right)-(8x+2x^{3}-1-2x^{2})$

3. $(2a-b)^{3}$ 4. $(4x-5)(2x^{5}+x^{3}-1)$ 5. $(2x-5)(4x+3)$

*Find the zeros of the function by factoring.*

6. $x^{3}+x^{2}+7x+7=0$ 7. $-x^{2}-11x-30=0$

8. $2x^{2}+12=25x$ 9. $4x^{2}-12x+9=0$