Student: _____ Date: _____	**Instructor:** Fouad Khoury **Course:** Math-1314	**Assignment:** Quiz 1.1

1. Expand.

   $(5x + 4)^3$

   - ○ **A.** $125x^3 + 300x^2 + 240x + 64$
   - ○ **B.** $25x^6 + 20x^3 + 4{,}096$
   - ○ **C.** $25x^2 + 40x + 16$
   - ○ **D.** $125x^3 + 300x^2 + 300x + 64$

2. Expand.

   $(3x + 2)^5$

   - ○ **A.** $243x^5 + 240x^4 + 720x^3 + 720x^2 + 240x + 32$
   - ○ **B.** $243x^5 + 162x^4 + 108x^3 + 72x^2 + 48x + 32$
   - ○ **C.** $243x^5 + 810x^4 + 1{,}080x^3 + 720x^2 + 240x + 32$
   - ○ **D.** $(9x^2 + 12x + 4)^5$

3. Expand.

   $(4x^2 - 2)^3$

   - ○ **A.** $64x^6 - 96x^4 + 48x^2 - 8$
   - ○ **B.** $64x^3 - 96x^2 + 48x - 8$
   - ○ **C.** $256x^8 + 64x^6 - 96x^4 + 48x^2 - 8$
   - ○ **D.** $(16x^4 - 16x^2 + 4)^3$

4. Expand.

   $(a - b)^6$

   - ○ **A.** $a^6 - 6a^5b + 15a^4b^2 - 20a^3b^3 + 15a^2b^4 - 6ab^5 + b^6$
   - ○ **B.** $a^6 + 6a^5b + 15a^4b^2 + 20a^3b^3 + 15a^2b^4 + 6ab^5 + b^6$
   - ○ **C.** $-a^6 + 6a^5b - 15a^4b^2 + 20a^3b^3 - 15a^2b^4 + 6ab^5 - b^6$
   - ○ **D.** $a^6 - 6a^5b - 15a^4b^2 - 20a^3b^3 - 15a^2b^4 - 6ab^5 - b^6$

5. Expand.

$$\left(x - \sqrt{2}\right)^5$$

- **A.** $x^5 - 5x^4\sqrt{2} + 20x^3 - 20x^2\sqrt{2} + 20x - 4\sqrt{2}$
- **B.** $x^5 - 5x^4\sqrt{2} + 20x^3 - 20x^2\sqrt{2} + 20x - 4$
- **C.** $x^5 - 5x^4\sqrt{2} + 2x^3 - 20x^2\sqrt{2} + 20x - 4\sqrt{2}$
- **D.** $x^5 - 5x^4\sqrt{2} + 20x^3 - 20x^2\sqrt{2} + 4x - 4\sqrt{2}$

6. Expand.

$$\left(\frac{1}{x} - 2x\right)^3$$

- **A.** $\dfrac{1}{x^3} - \dfrac{6}{x} + 12x^2 - 8x^3$
- **B.** $\dfrac{1}{x^3} - \dfrac{2}{x} + 12x - 8x^3$
- **C.** $\dfrac{1}{x^3} - \dfrac{6}{x^2} + 12x - 8x^3$
- **D.** $\dfrac{1}{x^3} - \dfrac{6}{x} + 12x - 8x^3$