

Name _____

Date _____

Introduction to Technical Mathematics

Class #11-B www.wnyssis.com

Solving and Checking Quadratic Equations.

Section 1. Special Arithmetic

1. Consider: $x^2 + 5x - 6 = 0$. Evaluate for $x = -6$ and $x = 1$

2. Consider: $x^2 + 9x + 18 = 0$. Evaluate for $x = -6$ and $x = -3$

3. Consider: $2x^2 - 3x - 5 = 0$. Evaluate for $x = -1$ and $x = \frac{5}{2}$

4. Consider: $6x^2 + 7x - 5 = 0$. Evaluate for $x = -\frac{5}{3}$ and $x = \frac{1}{2}$

Section 2. Solution and Check of Quadratic Equations:

5. Solve and Check the following equations.

a. $x^2 = 3x + 28$

a. _____

b. $x^2 + 4x = 21$

b. _____

c. $5x^2 + 12x - 9 = 0$

c. _____

d. $2x^2 + 10 = 9x$

d. _____

e. $x(x - 2) = 35$

e. _____

f. $x = \frac{40}{x - 3}$

f. _____

Section 3. Some Special Case Equations to Solve:

1. $c^2 = 8c$

1. _____

2. $x^2 = 16$

2. _____

Section 4. Some that are tougher??

3. $4x^2 - 12x + 9 = 0$

3. _____

4. $6x^2 - 7x - 20 = 0$

Section 3. The Sum and The Difference between Two Perfect Cubes.

Factoring the Sum and the Difference of Two Cubes: Section 8.5

Review - Perfect Cubes:	1^3	_____	6^3	_____
	2^3	_____	7^3	_____
	3^3	_____	8^3	_____
	4^3	_____	9^3	_____
	5^3	_____	10^3	_____

Factoring the Difference of Two Cubes: $(a - b)(a^2 + ab + b^2)$

Factoring the Sum of Two Cubes: $(a + b)(a^2 - ab + b^2)$

1st Example: $x^3 + 8$

2nd Example: $x^3 - 125$

3rd Problem: $x^3 - 1$

4th Problem $27x^6 - 8$ _____

5th Problem $c^4 + c$ _____

6th Problem: $a^3x^6 + a^3x^3y^3$ _____

7th Problem $x^6 - y^6$ _____

Homework Section:

Section(s)	Page(s)	Problem(s)
8.5	290 → 291	1, 5, 9, 13, 21, 25
11.2	374 → 375	1,5,9,13,15,19,23,27,31