

Name: \_\_\_\_\_

Period: \_\_\_\_\_

### INT Math 3 Algebra Prerequisites Day 3

1. Factor by any method:  $u^2 - 9u + 18$

$$\boxed{(u-3)(u-6)}$$

2. Factor by any method:  $6m^2 - 66m + 168$

$$6(m^2 - 11m + 28)$$
$$\boxed{6(m-4)(m-7)}$$

3. Factor:  $a^2 - 49$

$$\boxed{(a+7)(a-7)}$$

4. Factor the polynomial:  $4v^2 + 4v - 120$

$$4(v^2 + v - 30)$$
$$\boxed{4(v+6)(v-5)}$$

5. Factor the polynomial:  $a^2 - 12a + 35$

$$\boxed{(a-7)(a-5)}$$

6. Simplify the radical:  $\sqrt{125}$

$$\boxed{5\sqrt{5}}$$

7. Simplify the radical:  $\sqrt[3]{-243}$

$$\boxed{-9}$$

8. Solve for x:  $8x^2 + 32x - 360 = 0$

$$8(x^2 + 4x - 45) = 0$$
$$8(x+9)(x-5) = 0$$

$$\rightarrow x+9=0 \quad x-5=0$$

$$\boxed{x=-9 \text{ or } x=5}$$

9. For problem #8, list all of the factors of the polynomial.

$$8, \quad x+9 \quad \text{and} \quad x-5$$

10. For problem #8, list all of the zeros of the polynomial.

$$\boxed{x=-9 \text{ or } 5}$$