Name_____

Section 3.1

Algebra II: Factoring

Essential Questions:

- What are factors? All whole numbers that divide into a number - 6 (1 and 6, 2 and 3)
- what is a prime number? A number that can only be divided by 1 and itself.

Factor the Following:

Examples:

1) 12 = 2·6 = 1·2·2·3

-12 = -1·2·6 = -1·2·2·3

2) 140 = 10·14 = 2·5·7·2

Find a common Factor

3) 35 and 28

35 = 5·7

28 = 2·14 = 2·2·7

7

28 = 4·7 = 2·2·7

4) 18 and 45

18 = 2·9 = 2·3·3

45 = 5·9 = 5·3·3

3·3 = 9

Find the greatest common Factor

5) 28 and 70

28 = 2·14 = 2·2·7

70 = 10·7 = 5·2·7

2·7 = 14

6) 27 and 36

27 = 3·9 = 3·3·3

36 = 2·18 = 2·2·9 = 2·2·3·3

3·3 = 9

Name_____

Make a factor tree for each number. Factor into prime numbers.

1) 42

2) 125

3) 310

Find the greatest common factor.

4) 12 and 15

5) 16 and 22

6) 16 and 64

7) 21 and 42

Turn over

8) 16 and 36

9) 15 and 60

10) 42 and 48