Name:_____ Hour: _____ Date: _____

ALGEBRA SKILL BOOT CAMP

Homework: Practice Problems in this Packet

NOTE This will be graded on <u>correctness</u> *not* completion but you need to show your work to receive credit. This is due <u>tomorrow (Tuesday)</u>.

Combining Like Terms:

Simplify the expression. Write the expression in standard form.

1.) $9x + x - 7x$

2.) $5x + 2x^2 - x$

3.) $x + 1$

4.) $7x - 5 + 4x^2$

5.) $7x + 8 - x$

6.) $9 - 7x + 2x$

7.) $2x^2 + x - (x^2 + 3)$

8.) $7x - x(4x - 3)$

9.) $x^2 - (x + 1)$

10.) $-4(x + 6) - (1 + 2x)$

11.) $-2(x + 9) - 4x(3 - 2x)$

Factoring:

Factor the expression. Pay attention if the expression is a monomial, binomial, or trinomial!

1.) $4x^2$

2.) $x^2 - 11x + 24$

3.) $20x^2 - 12x$

4.) $x^2 - 36$

5.) $45x^3$

6.) $2x^2 + 4x$

7.) $3x^2 + 13x + 4$

8.) $2x^2 + 2x$

9.) $3x - 12$

10.) $6x^2 - 19x - 7$

11.) $2x^2 - 32$

12.) $x^3 + 3x^2$

13.) $3x^2 + 13x - 10$

14.) $11x^2 - x$

15.) $28x^5$

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Simplify Expressions:

Factor the numerator and denominator to simplify the rational expression.

1.) $\frac{4x}{12}$

2.) $\frac{15x^2}{10x}$

3.) $\frac{18x^2}{60x^3}$

4.) $\frac{5x - 10x^2}{15x}$

5.) $\frac{4x^3}{8x^4 - 16x^2}$

6.) $\frac{2x^2 + x}{2x + 1}$

7.) $\frac{x^2 - 16}{3x + 12}$

8.) $\frac{x^2 - 25}{x - 5}$

9.) $\frac{x - 3}{x^2 - 5x + 6}$

10.) $\frac{x^2 - 13x + 42}{x^2 + 3x + 2}$

11.) $\frac{x^2 - 4}{x^2 + 7x + 10}$

12.) $\frac{2x^2 + 5x + 3}{4x^2 + 4x - 3}$

13.) $\frac{x^2 + 5x + 4}{3x + 12}$