

MATH 161 WORKOUT 15 NAME: \_\_\_\_\_

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[ Run: 11/09/2012 at 10:52. Order of Checkable Items: List.]

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**15-1.** Identify  $(-11 + h)^2$

**15-2.** Identify the coefficient of the *constant term* of  $(+5 + h)^2$

**15-3.** Identify the coefficient of the *linear term* of  $(-4 + h)^2$

**15-4.** Identify the coefficient of the *quadratic term* of  $(+12 + h)^2$

**15-5.** Identify  $(-4 + h)^3$

**15-6.** Identify the coefficient of the *constant term* of  $(+12 + h)^3$

**15-7.** Identify the coefficient of the *linear term* of  $(+8 + h)^3$

**15-8.** Identify the coefficient of the *quadratic term* of  $(+7 + h)^3$

**15-9.** Identify the coefficient of the *cubic term* of  $(-5 + h)^3$

**15-10.** Let  $f$  be the function specified by the global input-output rule

$$x \xrightarrow{f} f(x) = \frac{x - 6}{x^3 + 8}$$

find the approximate local input-output rule of  $f$  near  $\infty$  that will give Concavity-sign.

**15-11.** Let  $f$  be the function specified by the global input-output rule

$$x \xrightarrow{f} f(x) = \frac{(x - 6)^3}{x^3 + 8}$$

find the approximate local input-output rule of  $f$  near  $\infty$  that will give Concavity-sign.

**15-12.** Let  $f$  be the function specified by the global input-output rule

$$x \xrightarrow{f} f(x) = \frac{(x + 5)^3}{x^2 - 9}$$

find the approximate local input-output rule of  $f$  near  $\infty$  that will give Concavity-sign.

