Name_____

DIAGNOSTIC

Common Core Standard 8.EE.A.1 – Expressions and Equations

☐ **Write the expanded form for the following exponent: $(-12)^4$. Be sure to show your work.**

A 1728

B $(-12) \times (-12) \times (-12) \times (-12)$

C $12 \times 12 \times 12 \times 12$

D $(-12) \times (-12) \times (-12) \times (-12) \times (-12)$

Common Core Standard 8.EE.A.1 – Expressions and Equations

☐ **Which option below is equivalent to $9^4 \times 5^{-2}$? Be sure to show your work.**

A 45^2

B $9 \times 9 \times 9 \times 9 \times 5 \times 5$

C $9 \times 9 \times 9 \times 9 \times \frac{1}{5} \times \frac{1}{5}$

D $9 \times 9 \times 9 \times 9 \times (-5) \times (-5)$

Common Core Standard 8.EE.A.1 – Expressions and Equations

☐ **Evaluate the exponential expression. Be sure to show your work.**

$$\frac{3^5}{6^2} - \frac{2^{-2}}{13^{-1}} = \square$$

A $\frac{972}{468}$

B $\frac{7}{2}$

C $\frac{60}{78}$

D $\frac{9}{4}$

Name_____

DIAGNOSTIC

Common Core Standard 8.EE.A.1 – Expressions and Equations

☐ Evaluate the exponential expression. Be sure to show your work.

$7^4 \times 7^{-6} \times 14 =$ ☐

A 2/7

B 3/14

C 7/2

D 3/7

Common Core Standard 8.EE.A.1 – Expressions and Equations

☐ Evaluate the exponential expression. Be sure to show your work.

$(-0.4)^3 \div 2^2 =$ ☐

A -0.016

B -3

C -.024

D -.006

Common Core Standard 8.EE.A.1 – Expressions and Equations

☐ Evaluate the exponent $(-2)^{-8}$. Be sure to show your work.

A -256

B $\frac{1}{256}$

C $\frac{1}{128}$

D $-\frac{1}{256}$