Algebra 1 Name KEY ID: 1

8.1 Practice A (1.e1 & 1.e2 NAQc)

Date _____ Period ____

NAQ.c.1 -- no calculator allowed
Evaluate a numeric exponential power. Clearly show work. Circle your answer.

1) 2^4 =

$2 \cdot 2 \cdot 2 \cdot 2 = \boxed{16}$

2) 2^5 =

$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = \boxed{32}$

3) 3^4

$3 \cdot 3 \cdot 3 \cdot 3 = \boxed{81}$

4) 5^3

$5 \cdot 5 \cdot 5 = \boxed{125}$

5) 10^3

$10 \cdot 10 \cdot 10 = \boxed{1,000}$

6) 3^3

$3 \cdot 3 \cdot 3 = \boxed{27}$

7) 2^6

$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = \boxed{64}$

8) 10^6

$10 \cdot 10 \cdot 10 \cdot 10 \cdot 10 \cdot 10 =$

$\boxed{1,000,000}$

9) 3^2

$3 \cdot 3 = \boxed{9}$

10) 2^3

$2 \cdot 2 \cdot 2 = \boxed{8}$

Simplify. -- no calculator allowed
Evaluate a numeric exponential power WITH negative numbers. Clearly show work. Circle your answer.

11) $(-2)^4$ ← Answer must be +

$(-2)\cdot(-2)\cdot(-2)\cdot(-2) =$

$\boxed{16}$

12) $(-2)^5$ ← Answer must be Negative

$(-2)\cdot(-2)\cdot(-2)\cdot(-2)\cdot(-2) =$

$\boxed{-32}$

13) $(-3)^4$

$(-3)(-3)(-3)(-3) = \boxed{81}$

14) $(-2)^6$

$-2\cdot-2\cdot-2\cdot-2\cdot-2\cdot-2 = \boxed{64}$

USE Calculator to evaluate these numeric exponential power. NO work needed.

15) 6^4 $6 \wedge 4 = \boxed{1,296}$

16) 3^5 $3 \wedge 5 = \boxed{243}$

17) 10^3 $10 \wedge 3 = \boxed{1,000}$

18) 5^6 $5 \wedge 6 = \boxed{15,625}$

19) $(-5)^4$ $(-5) \wedge 4 = \boxed{625}$

20) $(-8)^4$ $(-8) \wedge 4 = \boxed{4,096}$

21) $(-3)^7$ $(-3) \wedge 7 = \boxed{-2,187}$

22) $(-2)^8$ $(-2) \wedge 8 = \boxed{256}$

Acad. Algebra 1

Name KEY ID: 2

8.1 Practice B (NAQ.c 1&2)

Date _____ Period ____

NAQ.c.1 -- no calculator allowed
Evaluate a numeric exponential power. Clearly show work. Circle your answer.

1) 10^5

10*10*10*10*10= 100,000

2) 5^3

5 *5 *5= 125

3) 2^6

2*2*2*2*2*2= 64

4) 3^4

3*3*3*3= 81

Simplify. -- no calculator allowed
Evaluate a numeric exponential power WITH negative numbers. Clearly show work. Circle your answer.

5) $(-2)^3$ → -#

(-2) (-2) (-2) = -8

Must use ()'s or -2 · -2 · -2

6) $(-2)^4$ → +#

(-2) (-2) (-2) (-2) = 16

7) $(-5)^4$ → +#

(-5) (-5) (-5) (-5) = 625

8) $(-5)^3$ → -#

(-5) (-5) (-5) = -125

USE Calculator to evaluate these numeric exponential power. NO work needed.

9) 4^6 4∧6

4,096

10) 5^6 5∧6

15,625

11) $(-2)^{10}$ (-2)∧10 must use ()'s

1,024

12) $(-5)^7$ (-5)∧7

-78,125

NAQ.c.2

Evaluate numeric expressions with positive integer exponents, using the product property. Clearly show work. Simplify the exponent expression; then evaluate. Circle your answer.

13) $5 \cdot 5^2$

$5^{1+2} = \boxed{5^3} = 5 \cdot 5 \cdot 5 = \boxed{125}$

14) $2^4 \cdot 2^2$

$2^{4+2} = \boxed{2^6} = 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = \boxed{64}$

15) $3 \cdot 3^2$ $= 3^{1+2} = \boxed{3^3} = 3 \cdot 3 \cdot 3 = \boxed{27}$

3^3

16) $2 \cdot 2^1 \cdot 2^4 = 2^{1+1+4} = \boxed{2^6} = \boxed{64}$

2^6

Evaluate NEGATIVE numeric powers with positive integer exponents, using the product property. Clearly show work. Simplify the exponent expression; then evaluate. Circle answer.

17) $(-3)^2 \cdot (-3)^1$

$(-3)^{2+1} = \boxed{(-3)^3} = (-3)\ (-3)\ (-3) = \boxed{-27}$

18) $-3 \cdot (-3)^3$

$(-3)^{1+3} = \boxed{(-3)^4} = (-3)\ (-3)\ (-3)\ (-3) = \boxed{81}$

19) $(-2)^4 \cdot (-2)^2$

$(-2)^{4+2} = \boxed{(-2)^6} =$

$(-2) \wedge 6 =$

20) $(-5)^2 \cdot (-5)^1$

$(-5)^{2+1} = \boxed{(-5)^3} = -5 \cdot -5 \cdot -5 = \boxed{-125}$

$(-5) \wedge 3$

Simplify. Show work.

21) $x^4 \cdot x$

$x^{4+1} = \boxed{x^5}$

22) $x^5 x^3$

$x^{5+3} = \boxed{x^8}$

23) xx^6x^4

$x^{1+6+4} = \boxed{x^{11}}$

24) $xx^3x^4x^2$

$x^{1+3+4+2} = \boxed{x^{10}}$