Algebra One – CP2
Chapter 1 Circle Groups

[1]

Simplify.

Please circle the ONE simplification you do per step. Answers can be whole numbers, mixed numbers or reduced fractions. No decimals! Box your answer.

$$\frac{(8-5) \bullet 3 + 5^2}{100 - 35 + 3}$$

[2]

Use a graphing calculator to evaluate.

Type the whole expression into your calculator in ONE step. As your "work step", write down EXACTLY what your screen says. If necessary, round to the nearest hundredth.

$$\frac{8^3}{6(10 + 2) - 5}$$

[3]

Name the property illustrated in each step.

A. $0 \bullet 7 + 8\,(1 + \frac{1}{8}) = \quad 0 \bullet 7 + 8(1) + 8(\frac{1}{8})$

B. $0 \bullet 7 + 8 + 8(\frac{1}{8})$

C. $0 \bullet 7 + 8 + 1$

D. $0 + 8 + 1$

E. $0 + (8 + 1)$

F. $0 + 9$

G. 9

[4]

Translate accurately. Let x = a number.

H. A number squared

I. The product of two and a number

J. Twice the difference of eight and a number

K. The quotient of a number squared and five

L. Six less than thrice a number

[5]

Evaluate if x = 3

Please circle the ONE simplification you do per step. Answers can be whole numbers, mixed numbers or reduced fractions. No decimals! Box your answer.

$4x^2 + x^3$

[6]

Simplify.

Show EVERY step. Box your answer.

M. $6(2x + 11)$

N. $8x + 5y + 11x + 12xy + 2y$

O. $5(x + 3) + 7(x – 2y)$

[7]

Find the solution set for $7x + 17 < x^2 - 1$
given the replacement set {3, 9, 11}.

Please label work and state TRUE or FALSE. Write answer in { } on the line.
You may do one simplification per side.

[8]

P. Use the distributive property to evaluate $7 \bullet 792$. (Show the work.)

Q. Evaluate 3^6. Show one work step.

R. Write $h \bullet h \bullet h \bullet h \bullet h \bullet h \bullet h \bullet h$ as an expression with exponents.

[9]

State whether the equation is <u>TRUE</u> or <u>FALSE</u> using the given value.
Please circle the ONE simplification you do per step.

$100 - 24 \div x \bullet 2 + 5 = 93 \; ; \; x = 4$

[10]

Evaluate if $x = 10$ and $y = 2$
Please circle the ONE simplification you do per step. Answers can be whole numbers, mixed numbers or reduced fractions. No decimals! Box your answer.

$y(2x - 11)^2 - xy$