Math 200 - Quiz 1
August 29, 2012

Name key

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (2 points) State any two steps of the four-step problem-solving process. Then list two significantly different strategies associated with each of your two steps.

① UNDERSTAND THE PROBLEM

i) READ AND REREAD PROBLEM

ii) TRANSLATE WORDS INTO MATH EXPRESSIONS

④ LOOK BACK

i) CHECK IN THE ORIGINAL WORDING OF THE PROBLEM

ii) GENERALIZE

2. (2 points) On a Halloween hayride, the number of girls was four less than twice the number of boys. The total number of girls and boys was 17. How many girls could NOT be paired with boys?

LET g = # OF GIRLS
b = # OF BOYS

$g = 2b - 4$
$b + g = 17$

$b + 2b - 4 = 17$
$3b = 21$
$b = 7$

7 BOYS AND
$2(7) - 4 = 10$ GIRLS.

THIS LEAVES 3 UNPAIRED GIRLS.

ANOTHER APPROACH COULD USE A TABLE *

BOYS	GIRLS	TOTAL
0	-4	-4
1	-2	-1
2	0	2
⋮	⋮	⋮
6	8	14
7	10	17

* 4 FEWER GIRLS THAN TWICE # OF BOYS

3. (1 point) Find the sum: $5 + 6 + 7 + \cdots + 878 + 879 + 880$

880 − 4 = 876 TERMS

$5 + 6 + 7 + \ldots + 879 + 880$

$880 + 879 + \ldots\ldots + 6 + 5$

876 GROUPS OF 885

$$\text{SUM} = \frac{876(885)}{2} = 387,630$$