

# Quiz 17

Name: \_\_\_\_\_

Solutions given without showing work will earn a zero. Circle your answers.

## Problem 1. [3+2=5 points]

- (a) Find the first 4 terms of the sequence with the formula  $a_n = 2n - 4$

$$a_1$$

$$n=1$$

$$2(1) - 4 = -2$$

$$a_2$$

$$n=2$$

$$2(2) - 4 = 0$$

$$a_3$$

$$n=3$$

$$2(3) - 4 = 2$$

$$a_4$$

$$n=4$$

$$2(4) - 4 = 4$$

$$\boxed{-2, 0, 2, 4}$$

(b) Find  $\sum_{n=1}^4 (2n - 4) = -2 + 0 + 2 + 4 = \boxed{4}$

## Problem 1. [3+2=5 points]

- (a) Find the first 5 terms of the sequence with the formula  $a_n = (n - 2)^2$

$$a_1 = (1-2)^2 = (-1)^2 = 1$$

$$a_2 = (2-2)^2 = 0^2 = 0$$

$$a_3 = (3-2)^2 = 1^2 = 1$$

$$a_4 = (4-2)^2 = 2^2 = 4$$

$$a_5 = (5-2)^2 = 3^2 = 9$$

$$\boxed{1, 0, 1, 4, 9}$$

(b) Find  $\sum_{n=1}^5 (n - 2)^2 = 1 + 0 + 1 + 4 + 9 = \boxed{15}$