

# Math 1303 - Math in the Liberal Arts

## Quiz #16 - 2014.11.12

### Solutions

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1. Consider the sequence  $\{2, 7, 12, 17, 22, \dots\}$ . Find the 121st entry in the sequence.

The first thing we do is find the formula for the arithmetic series:  $a_n = a_1 + (n - 1)d$ . Here,  $a_1 = 2$  and  $d = 5$ . So

$$a_{121} = 2 + 120 \cdot 5 = 602$$

2. Consider the sequence  $\{2, 7, 12, 17, 22, \dots\}$ . Find the sum of the first 121 entries of the sequence.

The formula for the sum of the first 121 terms is  $s = n(a_1 + a_{121})/2$ , which gives

$$s = \frac{121(2 + 602)}{2} = 36542$$