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**DEPARTMENT: MECHANICAL ENGINEERING**

**COURSE: MAT 101**

**QUESTION 2**

**number of terms = 15, d = -5**

**thus,**

**180 - 25/5 + 1**

**= 32**

**Average terms = average of first and last term**

**180 + 25/5**

**= 205/2**

**Therefore, sum of series,**

**=> 32 \* 205/2**

**= 3280,**

**QUESTION 3**

**Sum of roots**

**1/2 + 3/2**

**=> 4/2**

**= 2**

**Product of roots**

**1/2 \* 3/2**

**3/4**

**=> x^2 - 2x + 3/4**

**multiplying through by 4**

**=> 4x^2 - 8x + 12 = 0**