

1. How many nonnegative integer solutions are there of

$$x_1 + x_2 + x_3 + x_4 + x_5 = 40$$

with $x_i \leq 10$ for all i .

2. What is the coefficient of x^{17} in $(5x - \frac{3}{x^2})^{50}$?
3. For each of the following sequences, determine if there is a graph whose degree sequence is the one specified. If so, draw one. If not, say why not.
- 3, 3, 3, 3, 3
 - 3, 3, 3, 3, 2
 - 4, 3, 3, 2, 2, 2
 - 3, 3, 2, 2, 1, 1
 - 4, 3, 3, 1, 1
4. Are the following two graphs isomorphic? If so, label the vertices to display an isomorphism. If not, show why not.

