### PLOTS OF CLOSED FORMS

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### 1. Introduction

$$P(m, b, x) = \sum_{r=0}^{m} \sum_{k=1}^{n} \mathbf{A}_{m,r} k^{r} (n - k)^{r}$$
$$Q(m, b, x) = \sum_{r=0}^{m} \sum_{k=0}^{n-1} \mathbf{A}_{m,r} k^{r} (n - k)^{r}$$

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# 1.1. Polynomials Q(1,n,k).

$$Q(1, N, 0) = 0$$

$$Q(1, N, 1) = 1$$

$$Q(1, N, 2) = 6N - 4$$

$$Q(1, N, 3) = 18N - 27$$

$$Q(1, N, 4) = 36N - 80$$

$$Q(1, N, 5) = 60N - 175$$

$$Q(1, N, 6) = 90N - 324$$

$$Q(1, N, 7) = 126N - 539$$

$$Q(1, N, 8) = 168N - 832$$

$$Q(1, N, 9) = 216N - 1215$$

$$Q(1, N, 10) = 270N - 1700$$

$$Q(1, N, 11) = 330N - 2299$$

$$Q(1, N, 12) = 396N - 3024$$

$$Q(1, N, 13) = 468N - 3887$$

$$Q(1, N, 14) = 546N - 4900$$

$$Q(1, N, 15) = 630N - 6075$$

$$Q(1, N, 16) = 720N - 7424$$

$$Q(1, N, 17) = 816N - 8959$$

Q(1, N, 18) = 918N - 10692

Q(1, N, 19) = 1026N - 12635

Q(1, N, 20) = 1140N - 14800

# 1.2. Polynomials P(1,n,k).

$$P(1, N, 0) = 0$$

$$P(1, N, 1) = 6N - 5$$

$$P(1, N, 2) = 18N - 28$$

$$P(1, N, 3) = 36N - 81$$

$$P(1, N, 4) = 60N - 176$$

$$P(1, N, 5) = 90N - 325$$

$$P(1, N, 6) = 126N - 540$$

$$P(1, N, 7) = 168N - 833$$

$$P(1, N, 8) = 216N - 1216$$

$$P(1, N, 9) = 270N - 1701$$

$$P(1, N, 10) = 330N - 2300$$

$$P(1, N, 11) = 396N - 3025$$

$$P(1, N, 12) = 468N - 3888$$

$$P(1, N, 13) = 546N - 4901$$

$$P(1, N, 14) = 630N - 6076$$

$$P(1, N, 15) = 720N - 7425$$

$$P(1, N, 16) = 816N - 8960$$

$$P(1, N, 17) = 918N - 10693$$

$$P(1, N, 18) = 1026N - 12636$$

$$P(1, N, 19) = 1140N - 14801$$

$$P(1, N, 20) = 1260N - 17200$$

### References

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