

Solutions to Chapter 2 Exercises

2.10 $(x^3 + x^4 + x^5 + x^6 + x^7 + x^8)^4$

2.11 $X_1 + X_2 + X_3 = r,$

$$11 \leq X_1,$$

$$1 \leq X_2 \leq 3,$$

$$0 \leq X_3,$$

$$(x^{11} + x^{12} + \cdots)(x + x^2 + x^3)(1 + x + x^2 + \cdots)$$

2.15.1 $X_1 + X_2 + X_3 = r$

$$X_1 \geq 0,$$

$$X_2 \in \{0, 2, 4, \dots\},$$

$$X_3 \in \{0, 5, 10, \dots\}$$

$$(1 + x + x^2 + \cdots)(1 + x^2 + x^4 + \cdots)(1 + x^5 + x^{10} + \cdots)$$

2.15.2 4

2.15.3 55

2.15.4 18

2.21.1 $\frac{x(1+x)}{(1-x)^3} + \frac{x}{(1-x)^2} + \frac{1}{(1-x)}$

2.21.2 $\frac{-1}{(1+x)^2}$