

Unit 9 Homework Set Answers

Applied Finite Mathematics

Lesson 3

1. 0.75
2. $\frac{5}{6}$
3. $\frac{16}{52}$
4. $\frac{1}{32}, \frac{1}{2}$
5. $\frac{7}{988}$
6. No. Once an offspring is born with the affliction, the probability that future offspring of the same parents will be born with the affliction increases; 0.00096
7. $\frac{9}{250}, \frac{2169}{62500}$
8. The probability of at least one diamond is approximately 0.44, which is less than 0.5. So, the game favors the dealer.

Lesson 5

1. 10,080 people
2. 70 points
3. 1.44 million viewers
4. 0.75 base
5. 56 employees
6. \$7200
7. ≈ 141.51 service calls

Lesson 6

1. a) $P(x) = ({}_nC_x)(0.14)^x(0.86)^{n-x}$ b) $P(2) = ({}_{12}C_2)(0.14)^2(0.86)^{10}$
2. 0.24576
3. 0.25412
4. 0.06877
5. 0.4096
6. a) 0.00098 b) 0.08789 c) 0.10352