

1. A
2. B
3. B
4. B
5. B
6. B
7. A
8. B
9. C
10. C
11. A
12. B
13. D
14. D
15. C
16. B
17. C
18. D
19. A
20. B
21. A
22. B
23. D
24. B
25. C
26. B
27. A
28. B
29. C
30. C
31.  $16/88 = .181818\dots$

**.182**

32.

$$A. P(X < 5) = P(X=0) + P(X=1) + P(X=2) + P(X=3) + P(X=4) = .04 + .11 + .18 + .22 + .12 = \mathbf{.67}$$

$$B. P(X > 3) = P(X=4) + P(X=5) + P(X=6) + P(X=7) = .12 + .21 + .09 + .03 = \mathbf{.45}$$

$$C. P(X \leq 5) = P(X=0) + P(X=1) + P(X=2) + P(X=3) + P(X=3) + P(X=4) + P(X=5) = .04 + .11 + .18 + .22 + .12 + .21 = \mathbf{.88}$$

$$D. P(X \geq 4) = P(X=4) + P(X=5) + P(X=6) + P(X=7) = .12 + .21 + .09 + .03 = \mathbf{.45}$$

$$E. P(X=2 \text{ to } 5) = P(X=2) + P(X=3) + P(X=4) + P(X=5) = .18 + .22 + .12 + .21 = \mathbf{.55}$$

33.  $\sigma\mu$ 

$$A. P(X > 32.6) = P(X - \mu / \sigma > 32.6 - 31.74 / .58) = P(Z > 1.48) = 1 - P(Z < 1.48) = 1 - .9306 = \mathbf{.0694}$$

$$B. P(X < 31.58) = P(X - \mu / \sigma < 31.58 - 31.74 / .58) = P(Z < -.28) = \mathbf{.3897}$$

$$C. P(31.8 < X < 32.5) = P(31.8 - 31.74 / .58 < X - \mu / \sigma < 32.5 - 31.74 / .58) = P(.10 < Z < .10) = .9049 - .5398 = \mathbf{.3651}$$

$$34. 3P 2E 1R 1M 1N 1T = 4! / (3! \times 2! \times 1! \times 1! \times 1! \times 1!) = 24 / (6 \times 2 \times 1 \times 1 \times 1 \times 1) = 24 / 12 = \mathbf{2}$$

$$35. 10 \times 10 \times 10 \times 10 \times 26 \times 26 \times 26 \times 26 = 4,569,760,000 = \mathbf{1/4,569,760,000}$$

36.

$$A. 205 + 350 + 39 = 594 = 594 / 1000 = \mathbf{.594}$$

$$B. 350 + 190 = 730 = 730 / 1000 = \mathbf{.730}$$

$$C. (185 / 1000) / (185 + 205 / 1000) = .185 / .39 = \mathbf{.474}$$

$$D. 39 / 594 = \mathbf{.066}$$

$$E. 39 / 1000 = \mathbf{.039}$$

$$37. N = \# \text{ of all possible players} = 30 + 15 = 45$$

$$M = \# \text{ of college athletes} = 30$$

$$N = \# \text{ of basketball players chosen} = 10$$

$$P(X \geq 5) = 1 - P(X < 5) = 1 - P(\leq 4)$$

$$= 1 - \frac{\sum_{x=0}^4 \binom{30}{x} \binom{15}{4-x}}{\binom{45}{10}} = 1 - 0.052109951 = \mathbf{0.947890049}$$