

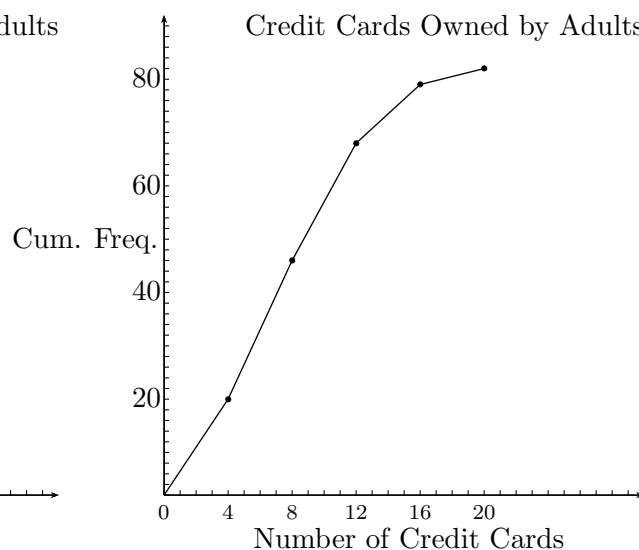
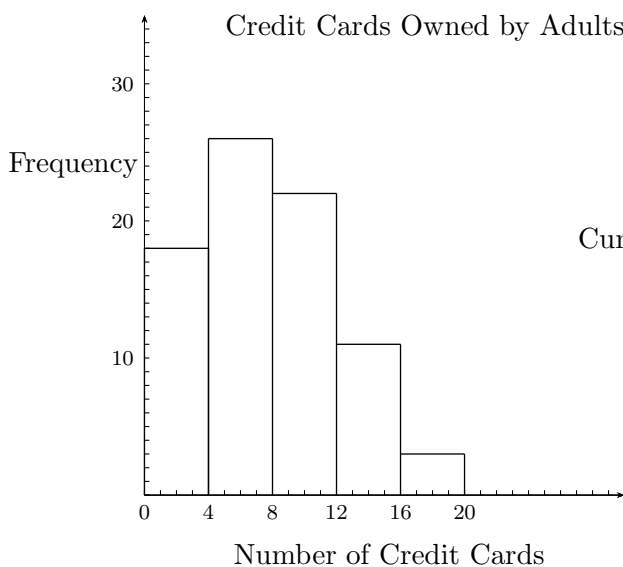
1. (a) F (b) T (c) F (d) F (e) T (f) F (g) T (h) F
2. (a) All employees currently working at the supermarket
 (b) The 20 selected employees
 (c) V : ordinal, W : nominal, X : discrete, Y : continuous, Z : nominal
3. (a) 23, 23, 24, 27, 28, 29, 29, 29, 32, 33, 35, 40
 $\bar{x} \simeq 29.33$, $\tilde{x} = 29$, mode=29, midrange=31.5, and range=17
 (b) $L = 23$, $Q_1 = 25.5$, $Q_2 = \tilde{x} = 29$, $Q_3 = 32.5$, and $H = 40$
 (c) $P_{30} = 27$
4. (a) 10
 (b) $\frac{1}{10}$
5. The completed table is

# of Credit Cards (Class limits)	# of Adults f	Class Mark (x)	xf	x^2f	Cumulative Freq.	Cum. Rel. Freq.
0–4	18	2	36	72	18	0.225
4–8	26	6	156	936	44	0.55
8–12	22	10	220	2200	66	0.825
12–16	11	14	154	2156	77	0.9625
16–20	3	18	54	972	80	1

(a) $\bar{x} = \frac{620}{80} = 7.75$, $s \simeq 4.4$

(b) $\tilde{x} = 6$

(c) The histogram and ogive are as follows



6. (a) $P(\bar{A}) = 0.55$
 (b) $P(A \cup B) = 0.95$
 (c) $P(A|B) = \frac{1}{6} \simeq 0.167$
 (d) $P(A \cap \bar{B}) = 0.35$

7. (a) $E = \{(1, 4), (1, 5), (1, 6), (2, 5), (2, 6), (3, 6), (4, 1), (5, 1), (5, 2), (6, 1), (6, 2), (6, 3)\}$
(b) $F = \{(1, 6), (2, 6), (3, 6), (4, 6), (5, 6), (6, 6)\}$
(c) $E \cap F = \{(1, 6), (2, 6), (3, 6)\}$
(d) $P(E) = \frac{1}{3}$
(e) $P(F) = \frac{1}{6}$
(f) $P(E \cap F) = \frac{1}{12}$
(g) $P(F|E) = \frac{1}{4}$
(h) No since $P(F|E) \neq P(F)$
8. (a) $\frac{62}{87}$ (b) $\frac{22}{87}$ (c) $\frac{66}{89}$ (d) $\frac{91}{186}$ (e) $\frac{11}{40}$
9. 0.56
10. $\mu = 5$ and $\sigma = 1.897$
11. (a) 0.113
(b) 0.355
12. (a) 0.03
(b) 0.865
(c) 0.3
13. (a) $P(z > 2.32) = 0.0102$
(b) $P(z < -1.54) = 0.0618$
(c) $P(-1.56 < z < 2.31) = 0.9302$
(d) $t(13, 0.975) = -2.16$
(e) $z_0 \simeq 1.42$
14. $x = 894$
15. Approximately 0.83
16. Approximately 0.0667
17. $n = 1449$
18. (181.06, 190.94)
19. (0.414, 0.466)