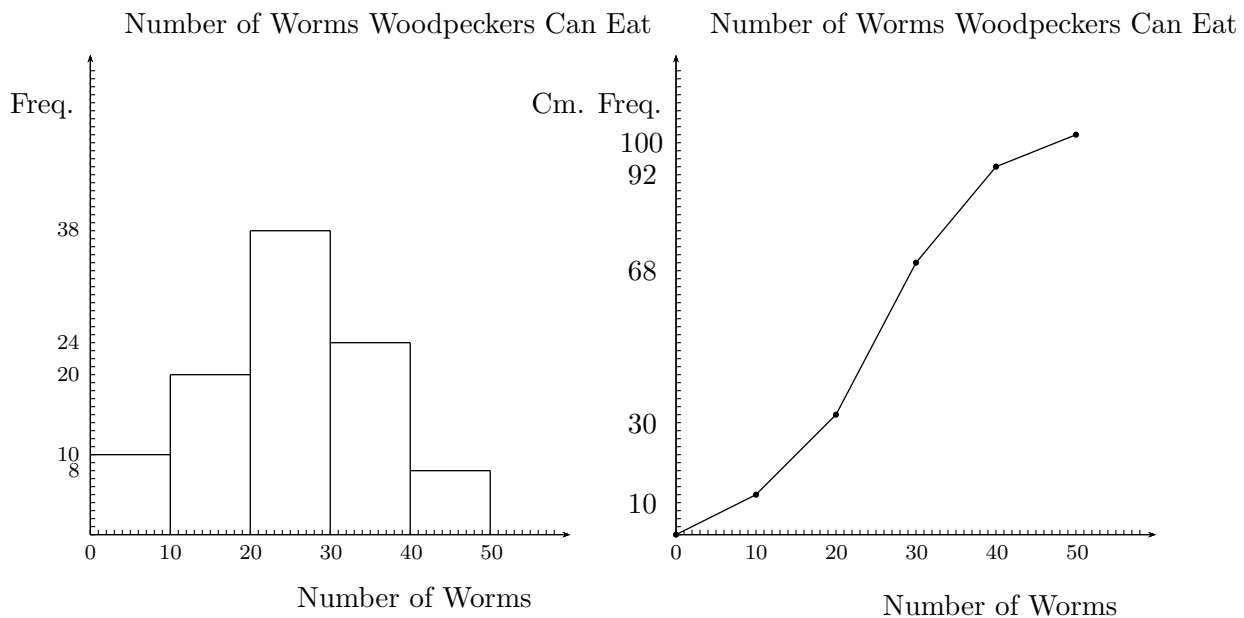


1. (a) F (b) F (c) T (d) F (e) T (f) F (g) T (h) T
2. Data (one) (g) Data (set) (d) Experiment (h) Parameter (f)
 Population (b) Sample (c) Statistic (a) Variable (e)
3. (a) 462, (b) 200
4. (a) 0.1, (b) 0.25, (c) No since $P(A|B) \neq P(A)$
5. (a) 47, 48, 49, 50, 52, 55, 55, 55, 55, 60, 64, 65
 $\bar{x} \simeq 54.58$, $\tilde{x} = 55$, mode=55, range=18
 (b) $L = 47$, $Q_1 = 49.5$, $Q_2 = \tilde{x} = 55$, $Q_3 = 57.5$, and $H = 65$
6. The completed table is:

# of worms (Class limits)	# of woodpeckers f	Class Mark x	xf	x^2f	Cumulative Frequency	Cumulative Rel. Frequency
0–10	10	5	50	250	10	0.1
10–20	20	15	300	4500	30	0.3
20–30	38	25	950	23750	68	0.68
30–40	24	35	840	29400	92	0.92
40–50	8	45	360	16200	100	1

(a) $\bar{x} = \frac{2500}{100} = 25$, $s \simeq 10.82$

(b) The histogram and ogive are as follows:



7. (a) $\frac{91}{210} = \frac{13}{30}$
 (b) $\frac{129}{210} = \frac{43}{70}$

(c) $\frac{71}{81}$

8. (a) Using Chebyshev's Theorem with $k = 2$, we get $1 - \frac{1}{k^2} = 0.75$ (Approximately 75% of the data).
(b) The standard deviation remains the same ($s = 21$).
9. $\mu = 0.44$ and $\sigma = 0.85$
10. $P(0) + P(1) = 0.89$
(a) 0.328
(b) 0.205
(c) 0.994
11. (a) 0.169
(b) 0.715
12. (a) 0.0764
(b) 0.9505
(c) 0.9302
(d) 2.68
(e) -1.76
(f) 2.11
13. (a) 0.0455, (b) $x = 104.32$
14. 0.1762
15. Using one decimal accuracy for $\sigma_{\bar{x}} = \frac{1.3}{\sqrt{10}} \simeq 0.4$ we get (a) 0.0668, (b) 0.7745.
16. (a) $\bar{x} = 57.6$, (b) (56.63, 58.57)
17. $n = 60$
18. (a) $p' = 0.21$, (b) (0.14, 0.28)
19. Use the t-test (σ unknown) to get (7.31, 12.09)