

1. True 2. True 3. False – means that 37% did worse than that score. 4. False – the mode is the piece of data that occurs most often. 5. False. Experimental probability is based on real data – theoretical prob. is based on theory only. 6. True 7. False $6 \times 6 = 36$ 8. True 9. True $2 \times 2 \times 2 \times 2 \times 2 = 32$ 10. True 11. False – not enough information, they might have the top or the bottom score. 12. True nationally only 45% of the students did better and locally 47% of the students did better.

	1	2	3	4
1	2	3	4	5
2	3	4	5	6
3	4	5	6	7
4	5	6	7	8

13.

14. a. $\frac{5}{20} = \frac{1}{4} = 25\%$ b. $\frac{12}{20}$ c. 0 d. $5:15 = 1:3$ e. $\frac{4}{9}$

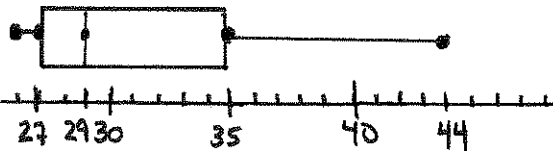
f. E.V. = $\frac{8}{20}(\$1) + \frac{3}{20}(\$10) + \frac{9}{20}(\$0) = \frac{8+30}{20} = \1.90 then subtract \$2.00 is $-\$0.10$

15. $P(\leq 5 \text{ or Club}) = P(\leq 5) + P(\text{Club}) - P(\leq 5 \text{ and Club}) = \frac{20}{52} + \frac{13}{52} - \frac{5}{52} = \frac{28}{52} = \frac{14}{26} = \frac{7}{13}$

16. a. ${}_{10}P_5 = 30,240$ b. ${}_{10}C_5 = 252$ 17. b. 0.067 c. $1 - 0.067 = 0.933$

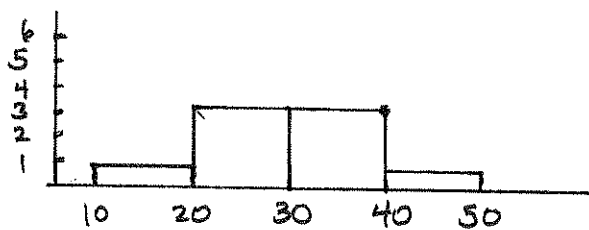
19. a. mean = $240/8 = 30$ b. median = 29 c. mode = 28 d. $\sigma = 8.24$

20. $L_0 = 14$
 $Q_1 = 27$
 Med = $Q_2 = 29$
 $Q_3 = 35$
 $H_i = 44$
 * 14



Outliers:
 $1.5(Q_3 - Q_1) = 1.5(35 - 27) = 12$
 $Q_3 + 12 = 35 + 12 = 47$
 $Q_1 - 12 = 27 - 12 = 15$
 So 14 is an outlier

21.

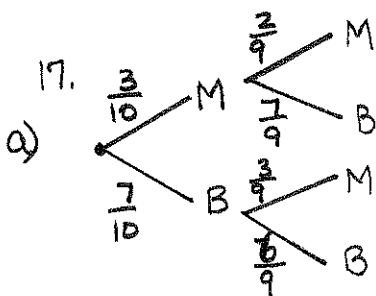


22. a. True b. True 23. $z = (430 - 450) / 60 = -0.333$ So percentile is 37th percentile.

24. a. 90 miles/hour $\times 1/3$ h = 30 miles b. 45 miles $\times 1/2$ h = 22.5 miles c. 50 minutes = $5/6$ hour

d. $AVG = \frac{\text{total miles}}{\text{total time}} = \frac{30 + 22.5}{5/6 \text{ h}} = \frac{52.5}{5/6 \text{ h}} = 63 \text{ miles/hour}$

25. mean = $\frac{2100 + 800 + (5 \times 90)}{30 + 10 + 5} = 74.4$



b.) $p(MM) = \frac{3}{10} \cdot \frac{2}{9} = \frac{6}{90}$

c.) $p(\text{at least 1 is B}) = 1 - p(MM) = 1 - \frac{6}{90} = \frac{84}{90}$