

Alg 2 Prob Review WS

$$1. \frac{1}{6} \cdot \frac{1}{4} = \frac{1}{24} \approx .042$$

$$2. \frac{3}{6} \cdot \frac{1}{4} = \frac{3}{24} = \frac{1}{8} \approx .13$$

$$3. \frac{2}{6} \cdot \frac{1}{4} = \frac{2}{24} = \frac{1}{12} \approx .083$$

$$4. \frac{3}{6} \cdot \frac{1}{4} = \frac{3}{24} = \frac{1}{8} \approx .13$$

$$5. \frac{1}{6} \cdot \frac{0}{4} = \frac{0}{24} = 0$$

6. The roll of the die has no bearing on what is spun.

$$7. P(R, Y) = \frac{3}{6} \cdot \frac{2}{5} = \frac{6}{30} = \frac{1}{5} = .20$$

$$8. P(B, Y) = \frac{1}{6} \cdot \frac{2}{5} = \frac{2}{30} = \frac{1}{15} \approx .067$$

$$9. P(R, B) = \frac{3}{6} \cdot \frac{1}{5} = \frac{3}{30} = \frac{1}{10} = .10$$

$$10. P(\sim Y, Y) = \frac{4}{6} \cdot \frac{2}{5} = \frac{8}{30} = \frac{4}{15} \approx .27$$

$$11. P(R, R, R) = \frac{3}{6} \cdot \frac{2}{5} \cdot \frac{1}{4} = \frac{6}{120} = \frac{1}{20} \approx .050$$

$$12. P(R, Y) = \frac{3}{6} \cdot \frac{2}{6} = \frac{6}{36} = \frac{1}{6} \approx .17$$

$$13. P(B, Y) = \frac{1}{6} \cdot \frac{2}{6} = \frac{2}{36} = \frac{1}{18} \approx .056$$

$$14. P(R, B) = \frac{3}{6} \cdot \frac{1}{6} = \frac{3}{36} = \frac{1}{12} \approx .083$$

$$15. P(\sim Y, Y) = \frac{4}{6} \cdot \frac{2}{6} = \frac{8}{36} = \frac{2}{9} \approx .22$$

$$16. P(R, R, R) = \frac{3}{6} \cdot \frac{3}{6} \cdot \frac{3}{6} = \left(\frac{1}{2}\right)^3 = \frac{1}{8} \approx .13$$

$$17. P(2, B) = \frac{1}{4} \cdot \frac{1}{5} = \frac{1}{20} \approx .050$$

$$18. P(\text{even}, c) = \frac{2}{4} \cdot \frac{1}{5} = \frac{2}{20} = \frac{1}{10} = .10$$

$$19. P(\text{odd}, \text{vowel}) = \frac{2}{4} \cdot \frac{2}{5} = \frac{4}{20} = \frac{1}{5} = .20$$

$$20. P(\text{prime}, D) = \frac{2}{4} \cdot \frac{1}{5} = \frac{2}{20} = \frac{1}{10} = .10$$

Yrs	0-4	5-9	10-14	14+	
M	12	6	17	21	56
F	8	9	13	14	44
	20	15	30	35	100

$$1. P(F) = \frac{44}{100} = \frac{11}{25} = .44$$

$$2. P(0-4 | M) = \frac{12}{56} = \frac{3}{14} \approx .21$$

$$3. P(F | 10-14) = \frac{13}{30} \approx .43$$

* On 2-5, the vertical bar between 2 categories is "given"

$$4. P(M | 14+) = \frac{21}{35} = \frac{3}{5} = .60$$

$$5. P(<14 | F) = \frac{30}{44} = \frac{15}{22} \approx .68$$