Name ANSWER KEY Per. _____ Date _____

PROBABILITY QUIZ REVIEW

You roll a die and draw one letter tile from a bag containing each letter of the alphabet. Calculate the probability of each of the following compound events..

1. P(6 and A)

$\frac{1}{6} \cdot \frac{1}{26} = \boxed{\frac{1}{156}} = \boxed{0.6\%}$

2. P(odd and G)

$\frac{3}{6} \cdot \frac{1}{26} = \boxed{\frac{3}{156}} = \boxed{1.9\%}$

3. P(at least 3 and vowel)

$\frac{4}{6} \cdot \frac{5}{26} = \frac{20}{156} = \boxed{\frac{5}{39}} = \boxed{12.8\%}$

4. P(2 and consonant)

$\frac{1}{6} \cdot \frac{26-5}{26} = \boxed{\frac{7}{52}} = \boxed{13.5\%}$

You are drawing cards from a standard deck. Calculate the probability of selecting a card/cards with the given characteristics.

5. P(red, then 4) *with replacement*

$\frac{26}{52} \cdot \frac{4}{52} = \boxed{\frac{1}{26}} = \boxed{3.8\%}$

6. P(diamond, then spade) *without replacement*

$\frac{13}{52} \cdot \frac{13}{51} = \boxed{\frac{13}{204}} = \boxed{6.4\%}$

7. P(red or 4)

$\frac{26}{52} + \frac{4}{52} - \frac{2}{52} = \frac{28}{52} = \boxed{\frac{7}{13}} = \boxed{53.8\%}$

8. P(diamond or spade)

$\frac{13}{52} + \frac{13}{52} = \frac{26}{52} = \boxed{\frac{1}{2}} = \boxed{50\%}$

9. P(black or club)

$\frac{26}{52} + \frac{13}{52} - \frac{13}{52} = \boxed{\frac{1}{2}} = \boxed{50\%}$

10. P(even or face card)

$\frac{5 \cdot 4}{52} + \frac{3 \cdot 4}{52} = \frac{20}{52} + \frac{12}{52} = \frac{32}{52} = \boxed{\frac{8}{13}} = \boxed{61.5\%}$

There are 20 individual socks in a drawer: 8 blue, 6 white, and 4 black, 2 brown. Calculate the probability of randomly pulling socks out of the drawer in the given order if you **do not replace** the socks as you remove them.

11. P(white, blue)

$\frac{6}{20} \cdot \frac{8}{19} = \boxed{\frac{12}{95}} = \boxed{12.6\%}$

12. P(black, white)

$\frac{4}{20} \cdot \frac{6}{19} = \boxed{\frac{6}{95}} = \boxed{6.3\%}$

13. P(blue, blue)

$\frac{8}{20} \cdot \frac{7}{19} = \boxed{\frac{14}{95}} = \boxed{14.7\%}$

14. P(white, brown, white)

$\frac{6}{20} \cdot \frac{2}{19} \cdot \frac{5}{18} = \boxed{\frac{1}{114}} = \boxed{0.9\%}$

OVER FOR MORE!

Name _____ Per. _____ Date _____

You are ordering a pizza online. You've opted for the "Live Dangerously!" option, which allows the computer to randomly select a crust, sauce, meat, and single additional topping to order for you. The following table lists the options available at the restaurant.

Crust	Sauce	Meat	Toppings
White	Red	Pepperoni	Peppers
Wheat	White	Ham	Onions
Pretzel		Bacon	Pineapple
		No Meat	Olives
			Extra Cheese

*Determine if the given scenarios are **mutually exclusive** or **not mutually exclusive** events.*

15. P(white crust or wheat crust)

mutually exclusive

16. P(bacon or extra cheese)

not M.E.

17. P(red sauce or no meat)

not M.E.

18. P(peppers or onions)

M.E.

Calculate the probability of receiving a pizza with the given specifications.

19. P(wheat crust and white sauce)

$\frac{1}{3} \cdot \frac{1}{2} = \frac{1}{6} = 16.7\%$

20. P(meat and peppers)

$\frac{3}{4} \cdot \frac{1}{5} = \frac{3}{20} = 15\%$

21. P(white crust, red sauce, ham, and pineapple)

$\frac{1}{3} \cdot \frac{1}{2} \cdot \frac{1}{4} \cdot \frac{1}{5} = \frac{1}{120} = 0.8\%$

22. P(non-pretzel crust and vegetable topping)

$\frac{2}{3} \cdot \frac{3}{5} = \frac{6}{15} = \frac{2}{5} = 40\%$