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Warm up is in Google Classroom

	1. $P(\text{stripes})$ $\frac{4}{12}$	$\frac{1}{3}$	2. $P(\text{less than 9})$ $\frac{8}{12}$	$\frac{2}{3}$
	3. $P(\text{polka dots and odd})$ $\frac{1}{12}$	$\frac{1}{12}$	4. $P(\text{black or at least 5})$ $\frac{10}{12}$	$\frac{5}{6}$

5. If the spinner below is spun once, which event is least likely to happen?

- A. the spinner lands on a prime number
- B. the spinner lands on a shaded number
- C. the spinner lands on a multiple of 3
- D. the spinner lands on a number that is at least 9

Handwritten notes:
 $\frac{6}{16}$
 $\frac{7}{16}$
 $\frac{5}{16}$
 $\frac{6}{16}$

C

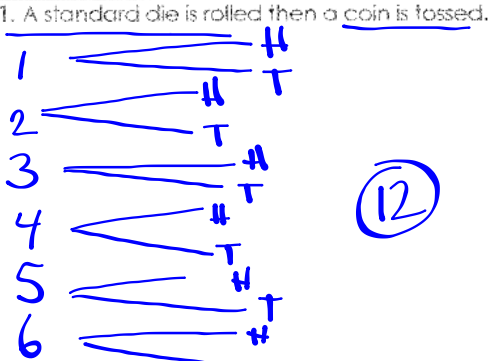
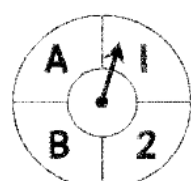
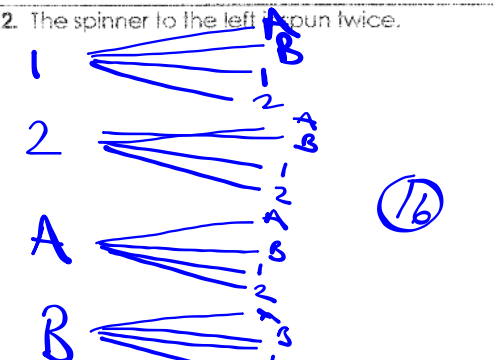
Why Did the Teacher Jump in the Pool?

Directions: Find each probability. After completing each set, find matching answers between Column 1 and Column 2. One will have a letter and the other a number. Write the letter in the matching numbered box at the bottom of the page.

		COLUMN 1		COLUMN 2	
SET 1	<p>The spinner below is spun once.</p>	T $P(\text{even})$	$\frac{1}{2}$	9 $P(\text{unshaded})$	$\frac{5}{8}$
		E $P(\text{at least } 7)$	$\frac{5}{8}$	7 $P(10 \text{ or a multiple of } 3)$	$\frac{3}{8}$
		T $P(\text{prime})$	$\frac{3}{8}$	2 $P(\text{shaded and at most } 4)$	$\frac{1}{8}$
		O $P(\text{multiple of } 5 \text{ and odd})$	$\frac{1}{8}$	12 $P(\text{less than } 9)$	$\frac{1}{2}$
SET 2	<p>The set of cards below has 3 background styles (solid, stripes, and checkered) and 3 shapes (stars, squares, and triangles). One card is chosen at random.</p>	W $P(\text{stripes})$	$\frac{1}{4}$	6 $P(\text{a triangle})$	$\frac{1}{6}$
		T $P(\text{a star})$	$\frac{1}{2}$	10 $P(\text{solid and a star})$	$\frac{1}{4}$
		R $P(\text{solid or checkered})$	$\frac{3}{4}$	1 $P(\text{a square or a triangle})$	$\frac{1}{2}$
		T $P(\text{checkered and a square})$	$\frac{1}{8}$	4 $P(\text{stripes and a star})$	$\frac{1}{2}$
		E $P(\text{solid and a triangle})$	$\frac{1}{12}$	14 $P(\text{checkered or a star})$	$\frac{3}{4}$
SET 3	<p>There are 2 blue, 6 yellow, 10 red, and 3 green, 5 orange, and 4 purple marbles in a jar. One marble is chosen at random.</p>	S $P(\text{red})$	$\frac{1}{3}$	11 $P(\text{orange})$	$\frac{1}{6}$
		E $P(\text{red, yellow, or purple})$	$\frac{2}{3}$	3 $P(\text{yellow})$	$\frac{1}{5}$
		A $P(\text{green or blue})$	$\frac{1}{6}$	13 $P(\text{not red})$	$\frac{2}{3}$
		H $P(\text{orange, purple, or yellow})$	$\frac{1}{2}$	5 $P(\text{purple or yellow})$	$\frac{1}{3}$
		T $P(\text{blue or purple})$	$\frac{1}{5}$	8 $P(\text{blue, red, green})$	$\frac{1}{2}$

ANSWER:

1. T 2. O 3. T 4. E 5. S 6. T 7. T 8. H 9. E 10. W 11. A 12. T 13. E 14. R !

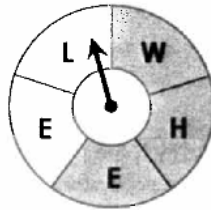
Name:		Date:
Topic:		Class:
Main Ideas/Questions	Notes/Examples	
COMPOUND EVENTS	Two or more events at a time Example: spinner and roll die	
COMPOUND PROBABILITY	Compound probability is the probability of a compound event. As with a single event, the probability of a compound event is the ratio of the number of favorable outcomes to the total number of outcomes.	
METHOD 1: Using Tree Diagrams	Draw a tree diagram and list the sample space to find each probability.	
	<p>1. A standard die is rolled then a coin is tossed.</p>  <p>Sample Space: 1H, 1T, 2H, 2T, 3H 3T, 4H, 4T, 5H, 5T, 6H, 6T</p>	<p>a) P(heads) $\frac{6}{12} = \frac{1}{2}$</p> <p>b) P(even number) $\frac{6}{12} = \frac{1}{2}$</p> <p>c) P(odd number then tails) $\frac{3}{12} = \frac{1}{4}$</p> <p>d) P(at least 5 then heads) $\frac{2}{12} = \frac{1}{6}$</p> <p>e) P(5 or tails) $\frac{7}{12}$</p>
	<p>2. The spinner to the left is spun twice.</p>  <p>Sample Space: 1A, 1B, 11, 12, 2A, 2B, 21, 22 AA, AB, BA, BB, A1, B1, B2</p>	<p>a) P(letter both times) $\frac{4}{16} = \frac{1}{4}$</p> <p>b) P(at least one B) $\frac{7}{16}$</p> <p>c) P(A then 2) $\frac{1}{16}$</p> <p>d) P(not spinning A) $\frac{9}{16}$</p> <p>e) P(2 both times) $\frac{1}{16}$</p>

METHOD 2:

Multiplying Probabilities

The probability of two independent events can be found by **multiplying** the probability of the first event by the probability of the second event.

3. The spinner below is spun twice. Find each probability.



a) $P(W \text{ both times})$

$$\frac{1}{5} \times \frac{1}{5} = \frac{1}{25}$$

b) $P(E, \text{ then a shaded region})$

$$\frac{2}{5} \times \frac{2}{5} = \frac{4}{25}$$

c) $P(\text{unshaded region both times})$

$$\frac{3}{5} \times \frac{3}{5} = \frac{9}{25}$$

4. There are 4 red, 8 blue, 2 green, and 6 yellow paperclips in a jar. A paperclip is drawn, replaced, then another paperclip is drawn. Find each probability.

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a) $P(\text{green, then blue})$

$$\frac{2}{20} \times \frac{8}{20} = \frac{1}{10} \times \frac{2}{5} = \frac{2}{50} = \frac{1}{25}$$

b) $P(\text{neither is red})$

$$\frac{16}{20} \times \frac{16}{20} = \frac{4}{5} \times \frac{4}{5} = \frac{16}{25}$$

c) $P(\text{both yellow})$

$$\frac{6}{20} \times \frac{6}{20} = \frac{3}{10} \times \frac{3}{10} = \frac{9}{100}$$

5. A number from 1-12 then a letter in the word **KANGAROO** is chosen at random.

a) $P(\text{even, then R})$

b) $P(\text{less than 9, then a vowel})$

c) $P(\text{prime number, then not K})$

6. A piggy bank contains 15 pennies, 5 nickels, 18 dimes, and 12 quarters. A coin is chosen a random, replaced, then another is chosen. Find each probability.

a) $P(\text{both dimes})$

b) $P(\text{a penny, then a quarter})$

c) $P(\text{both coins worth at least } 5\text{¢})$

Quiz

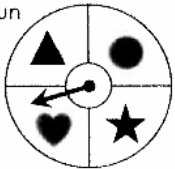
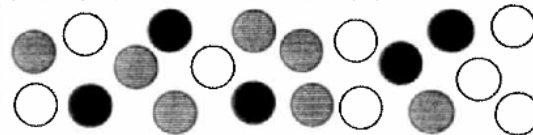
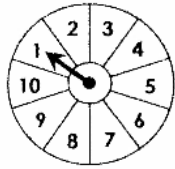
Finish Classwork

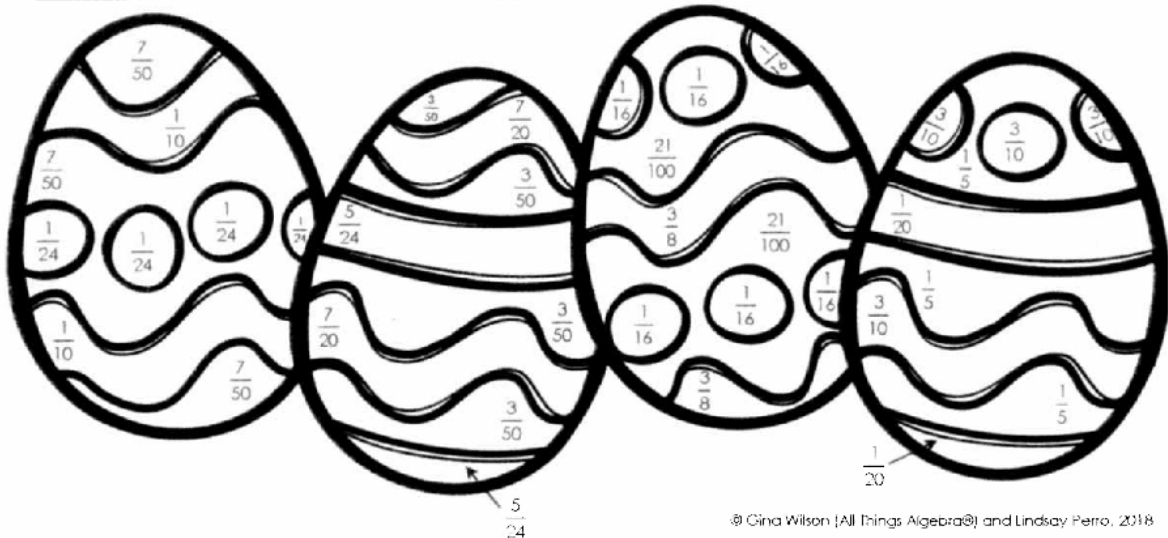
Start Homework

homework

Compound Probability

Directions: Find each probability. Identify your answer on the picture below and color accordingly.

For questions 1-3: The spinner is spun once and a standard die is rolled.		For questions 4-6: A marble is chosen, replaced, and then another marble is chosen.	
			
1. $P(\text{circle, then } 4)$	BLUE	4. $P(\text{black, then another black})$	YELLOW
2. $P(\text{not a star, then even})$	RED	5. $P(\text{not white, then stripes})$	ORANGE
3. $P(\text{heart, then at least } 2)$	GREEN	6. $P(\text{stripes, then white})$	PINK
For questions 7-9: A letter is chosen from the word OCEAN and a coin is flipped.		For questions 10-12: The spinner is spun twice.	
			
7. $P(C, \text{ then heads})$	PURPLE	10. $P(4, \text{ then even})$	YELLOW
8. $P(\text{vowel, then tails})$	PINK	11. $P(\text{odd, then at least } 4)$	BLUE
9. $P(\text{consonant, then heads})$	GREEN	12. $P(\text{less than } 7, \text{ then } 9)$	PURPLE



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