Lesson 12-8 Compound Events

A compound event is two or more events connected by the words "and" or "or."

When two events have no outcomes in common, the events are mutually exclusive events. If A and B are mutually exclusive events, then P(A and B) = 0. When events have at least one outcome in common, they are overlapping events.

You need to determine whether two events A and B are mutually exclusive before you can find P(A or B).

Key Concept Probability of A or B

Probability of Mutually Exclusive Events

If *A* and *B* are mutually exclusive events, P(A or B) = P(A) + P(B).

Probability of Overlapping Events

If *A* and *B* are overlapping events, P(A or B) = P(A) + P(B) - P(A and B).

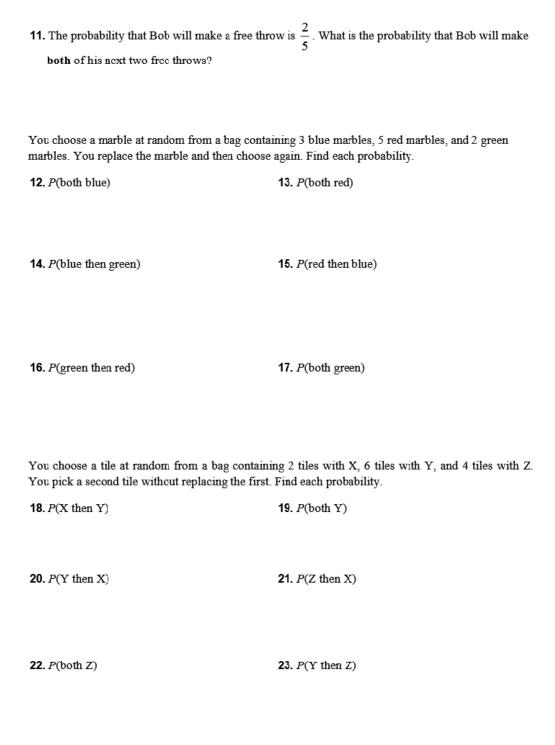
Problem 1 Mutually Exclusive and Overlapping Events

Suppose you spin a spinner that has 20 equal-sized sections numbered from 1 to 20.

- What is the probability that you spin a 2 or a 5?
- What is the probability that you spin a number that is a multiple of 2 or 5?

- Got It? 1. Suppose you roll a standard number cube.
 - a. What is the probability that you roll an even number or a number less than 4?
 - b. What is the probability that you roll a 2 or an odd number?

Name	Class	Date
12-8 Practice Probability of Compound		Form G
Probability of Compound	Events	
Suppose you spin a spinner that has 12 equal-s Remember not to count any numbers twice!		
1. <i>P</i> (3 or 4)	2 . <i>P</i> (even or 7)	
3. P(even or odd)	4. P(multiple of 3 or	r odd)
5. P(odd or multiple of 5)	6. <i>P</i> (less than 5 or g	reater than 9)
7. P(even or less than 8)	8. P(multiple of 2 or	multiple of 3)
9. P(odd or greater than 4)	10. P(multiple of 5 or	multiple of 2)



24. There are 12 girls and 14 boys in math class. The teacher puts the names of the students in a hat and randomly picks one name. Then the teacher picks another name without replacing the first. What is the probability that both students picked are boys?