Name _____ Date _____

5.4 Practice A

In Exercises 1 and 2, events A and B are disjoint. Find P(A or B).

1. $P(A) = 0.4$, $P(B) = 0.2$

2. $P(A) = \frac{1}{3}$, $P(B) = \frac{1}{2}$

3. At the high school swim meet, you and your friend are competing in the 50 Freestyle event. You estimate that there is a 40% chance you will win and a 35% chance your friend will win. What is the probability that you or your friend will win the 50 Freestyle event?

In Exercises 4 and 5, you roll a six-sided die. Find P(A or B).

4. **Event A:** Roll a 2.

Event B: Roll an odd number.

5. **Event A:** Roll an even number.

Event B: Roll a number greater than 3.

6. You bring your cat to the veterinarian for her yearly check-up. The veterinarian tells you that there is a 75% probability that your cat has a kidney disorder or is diabetic, with a 40% chance it has a kidney disorder and a 50% chance it is diabetic. What is the probability that your cat has both a kidney disorder and is diabetic?

7. A game show has three doors. A Grand Prize is behind one of the doors, a Nice Prize is behind one of the doors, and a Dummy Prize is behind one of the doors. You have been watching the show for a while and the table gives your estimates of the probabilities for the given scenarios.

	Door 1	Door 2	Door 3
Grand Prize	0.25	0.45	0.3
Nice Prize	0.4	0.25	0.35
Dummy Prize	0.35	0.3	0.35

a. Find the probability that you win either the Grand Prize or a Nice Prize if you choose Door 1.

b. Find the probability that you win either the Grand Prize or a Nice Prize if you choose Door 2.

c. Find the probability that you win either the Grand Prize or a Nice Prize if you choose Door 3.

d. Which door should you choose? Explain.