

### Addition Rules worksheet

1) In a group of 101 students 30 are freshmen and 41 are sophomores. Find the probability that a student picked from this group at random is either a freshman or sophomore.

$$\frac{71}{101}$$

2) In a group of 101 students 40 are juniors, 50 are female, and 22 are female juniors. Find the probability that a student picked from this group at random is either a junior or female.

$$\frac{40}{101} + \frac{50}{101} - \frac{22}{101} = \frac{68}{101}$$

3) Calculate the probability of getting a 2 or 5 when rolling a die.

$$\frac{1}{6} + \frac{1}{6} = \frac{2}{6} = \frac{1}{3}$$

4) A spinner has 4 equal sectors colored yellow, blue, green, and red. What is the probability of landing on red or blue after spinning this spinner?

$$\frac{1}{4} + \frac{1}{4} = \frac{2}{4} = \frac{1}{2}$$

5) A single card is chosen at random from a standard deck of 52 playing cards. What is the probability of choosing a king or a club?

$$\frac{4}{52} + \frac{13}{52} - \frac{2}{52} = \frac{15}{52}$$

6) In a math class of 30 students, 17 are boys and 13 are girls. On a unit test, 4 boys and 5 girls made an A grade. If a student is chosen at random from the class, what is the probability of choosing a girl or an A student?

$$\frac{13}{30} + \frac{9}{30} - \frac{5}{30} = \frac{17}{30}$$

7) On New Year's Eve, the probability of a person having a car accident is 0.09. The probability of a person driving while intoxicated is 0.32 and probability of a person having a car accident while intoxicated is 0.15. What is the probability of a person driving while intoxicated or having a car accident?

$$.09 + .32 - .15 = .26$$

8) A day of the week is chosen at random. What is the probability of choosing a Monday or Tuesday?

$$\frac{1}{7} + \frac{1}{7} = \frac{2}{7}$$

9) In a pet store, there are 6 puppies, 9 kittens, 4 gerbils and 7 parakeets. If a pet is chosen at random, what is the probability of choosing a puppy or a parakeet?

$$\frac{6}{26} + \frac{7}{26} = \frac{13}{26} = \frac{1}{2}$$

10) The probability of a New York teenager owning a skateboard is 0.37, of owning a bicycle is 0.81 and of owning both is 0.36. If a New York teenager is chosen at random, what is the probability that the teenager owns a skateboard or a bicycle?

$$.37 + .81 - .36 = .82$$

11) A number from 1 to 10 is chosen at random. What is the probability of choosing a 5 or an even number?

$$\frac{1}{10} + \frac{5}{10} = \frac{6}{10} = \frac{3}{5}$$

12) A single 6-sided die is rolled. What is the probability of rolling a number greater than 3 or an even number?

$$\frac{3}{6} + \frac{3}{6} - \frac{2}{6} = \frac{4}{6} = \frac{2}{3}$$