Algebra 2/Trigonometry
12.5 Probability and Odds Practice

Name: _____
Date: _____

Section 1 – State the odds of an event occurring given the probability of the event.

1) $\frac{4}{11}$ 4:7

2) $\frac{2}{3}$ 2:1

3) $\frac{5}{99}$ 5:94

Section 2- State the probability of an event occurring given the odds of the event:

4) $\frac{2}{23}$ $\frac{2}{25}$

5) $\frac{3}{8}$ $\frac{3}{11}$

6) $\frac{4}{5}$ $\frac{4}{9}$

Section 3 – A bag of gummy bears contains 10 red, 12 yellow, and 8 green. Find the probability of selecting the following at random:

7) P(1 red) $\frac{1}{3}$

8) P(not yellow) $\frac{3}{5}$

9) P(1 orange) 0

10) P(not orange) $\frac{30}{30}$

11) P(2 green in a row, w/o replacement) $\frac{28}{435}$

12) P(4 yellow in a row, w/ replacement) $\frac{16}{625}$

Section 4 – Complete each word problem.

13) In a box there are 5 pencils and 4 pens. A students picks an item from the box at random. What are the odds of not picking a pen?

5:4

14) On a certain test the scores were 3 A's, 10 B's, 4 C's, 2 D's, and 1 F. What are the odds that a students chosen at random earned a score of a C or better on the test?

17:3

Section 5 – From a standard deck of cards, a card (or cards) is drawn. Find the probability of each selection.

15) P(Ace) $\frac{1}{13}$

16) P(Not a Club) $\frac{39}{52} \rightarrow \frac{3}{4}$

17) P(Heart) $\frac{1}{4}$

18) P(Nine) $\frac{1}{13}$

19) P(Red) $\frac{1}{2}$

20) P(Not a face card) $\frac{10}{13}$

21) P(1 face card) $\frac{3}{13}$

22) P(1 face card then 1 ten, w/o replacement) $\frac{4}{221}$

23) P(2 face cards in a row, w/ replacement) $\frac{9}{169}$

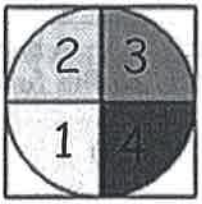
Algebra 2/Trigonometry
12.5 Probability and Odds Practice

Name: _____
Date: _____

Section 6 – Complete each word problem.

24) If a card is randomly selected from a standard deck of cards, what is the probability that the card is either a 2 or a spade? $\frac{4}{13}$

25) Both spinners to the right are spun at the same time. What is the probability of both spinners landing on 1? $\frac{1}{16}$



26) In a gym class, students are being randomly assigned to teams. If there are 12 girls and 18 boys in the class, what is the probability that the first person assigned is a girl and the second person assigned is a boy? $\frac{36}{145}$

27) Erica has a box that contains 14 pens – 5 black, 3 red, and 6 blue. She chooses a pen without looking, replaces it, and then chooses another pen. What is the probability that she chooses a black pen and then a red pen? $\frac{15}{196}$

28) Given a six-sided die,

A. what are the odds in favor of rolling a 3? 1:5

B. what are the odds against rolling a number greater than 4? 4:2

C. What is the probability of rolling a 3 two times in a row? 1:36

29) Using the spinner on the right, what are the odds in favor of spinning a 2? 1:1