

Algebra II Quiz 11.1

1. (15 points)

5 points each

Use your calculator to evaluate each expression: (Be careful when entering to the calculator)

A). $\frac{7! - 4!}{(6 - 3)!}$

B). $\frac{6!}{3!(8 - 5)!}$

C). $\frac{5!4!}{9!}$

2. (15 points)

5 points each

Compare. Write $>$, $<$, or $=$.

7. ${}_8P_3$ ${}_6C_3$

8. ${}_{12}C_9$ ${}_{12}C_7$

9. ${}_9P_5$ ${}_{10}P_5$

3. (10 points)

Louise wears an outfit everyday that consists of one top (shirt, T-shirt, or blouse), one bottom (pants or skirt) and one scarf. Her wardrobe consists of a tan skirt, a pair of black pants, 2 T-shirts, one silk blouse, 1 button-down shirt, and a set of 3 scarves.

How many different outfits can Louise put together?

Answer: _____

4. (10 points)

There are 7 singers competing at a talent show. In how many different ways can the singers appear?

Answer: _____

5. (10 points)

Joel owns 12 shirts and is selecting the ones he will wear to school next week. How many different ways can Joel choose a group of 5 shirts? (Note that he will not wear the same shirt more than once during the week.)

Answer: _____

6. (10 points)

The door code to get into a top-secret lab is 6 digits. The first 3 digits of the code are each odd numbers. The last 3 digits of the code are each even. All of the digits can be used more than once.

How many possible codes are there to gain access to the lab?

Answer: _____

Name: _____

ID: A

7. (10 points)

In how many ways can a 3-digit number be formed using the 0 - 9, if each digit is used only one time?

Answer: _____

8. (10 points)

The principal of the high school selects 4 Merit Scholars to attend the Key Club luncheon. If there are a total of 12 Merit Scholars at the school, in how many ways can the students be selected to attend the luncheon?

Answer: _____

9. (10 points)

Holly wants to choose 5 different decorative floor tiles out of 8. She plans to place the 5 tiles in a row, end to end, on the wall.

In how many different ways can she arrange them from left to right?

Answer: _____