Password Duel

Student quiz — Answer key

Directions: Write your answers for the questions below.

1. In your own words, explain what someone could do if they guessed the password to one of your accounts.

   Answers include (but are not limited to):

   Pretend to be me on social media

   Send emails pretending to be me

   Erase all my contacts

   Read my private messages

   Download my personal pictures or other files

   Steal items or money from an online video game

2. You play the password guessing game again with new rules. One student picks a single-character password using only lowercase letters, and the other student picks a single-character password using lower or uppercase letters. Which type of password do you think would be harder to guess? Explain your answer.

   The type of password with upper/lowercase letters will be harder to guess because there are more possibilities (52) than the type with only lowercase letters (26).

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Directions: Write your answers for the questions below.

3. A class plays the password guessing game with four different types of passwords. The table below shows how many times each type of password was guessed. Which type of password was the easiest to guess ? How does the data show this?

Password Type	Number of Times Password was Guessed
A	𝍸 ||
B	||||
C	𝍸 𝍸 𝍸 |
D	||

Password type C was the easiest to guess because it was guessed the most often.

4. Why do you think many websites force you to use lower and upper case letters, numbers, and symbols to create a password?

This makes your password harder to guess because there are many more possible combinations.

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Student quiz — Answer key

Directions: Write your answers for the question below.

5. You are buying a bike lock to keep your bike safe from thieves. You have a choice between a three-digit lock and a five-digit lock (each digit has numbers 0-9). If they are the same price, which lock would you pick? Why?

   You should pick the five-digit bike lock because there are more possible combinations*, and it would be harder for a thief to guess the correct combination. However, students might say that they would pick the three-digit lock because it would be easier to remember three digits, and they think three digits is sufficient for guarding a bike (it would still take a thief a long time to try all the combinations). This is an acceptable answer. Sometimes security rules are subjective!

   * 10,000 vs. 1,000, although students do not need to do this calculation to answer the question correctly.