

Name _____

Date _____

Gold

Gold used in jewelry is mixed with harder metals to add strength and durability. The metals added can also be used to change gold's color, giving it a fashionable rose or white tint, or to lighten or darken the natural yellow tone of pure gold. Mixtures like these, of less costly metals with more valuable ones, are called alloys. Copper and silver are the most common metals mixed with gold to make yellow gold jewelry. White gold is usually made with an alloy of gold and nickel.

The measure of gold's purity is called a karat. The higher the karat rating, the higher the amount of pure gold: 24 karat is pure gold, 18 karat is 75% pure gold, 14 karat is 58.5% pure gold, and 9 karat is 37.5% pure gold. All other things being equal, the higher the percentage of pure gold used in the alloy, the more valuable and expensive the jewelry will be.

Gold jewelry pieces are usually stamped with a marking to identify the karat amount. While gold that is 24K is too soft for jewelry, 18K, 14K and 9K gold are all appropriate for jewelry, and they all make pieces that look great and wear beautifully.



1) Which of the following statements best captures the main idea of this passage?

- A. Although gold is very valuable, it is also very expensive.
- B. Gold jewelry is stamped with its karat weight.
- C. Gold jewelry is made using alloys.
- D. Colored gold is more valuable than white gold.

2) Based on information in the passage, it can be understood that pure gold is

- A. not used to make rings
- B. stamped with 100K
- C. an alloy of different metals
- D. colorless

3) According to the passage, the use of other metals in gold alloys

- I. can be used to make the gold different colors
 - II. makes jewelry more expensive
 - III. makes gold more flexible
- A. I only
 - B. I and II only
 - C. II and III only
 - D. I, II, and III

4) Based on information in the passage, which of the following is most similar to an **alloy**?

- A. a karat
- B. a blend
- C. an ingredient
- D. an accessory

5) With respect to the relationship between gold and its karat rating, which of the following statements is/are true?

- I. The lower the karat rating, the less pure the gold.
- II. The higher the karat rating, the more expensive the gold.
- III. The higher the karat rating, the more valuable the gold.

- A. I only
- B. I and II only
- C. II and III only
- D. I, II, and III

6) Mr. Moneybags wants you to build him a car out of solid 24-karat gold. Explain to him why this is or is not a good idea. Be sure to use information from the passage.

Answers and Explanations

1) C

Core Standard: **Integration of Knowledge**

To determine the main idea of a passage, we need to examine the content of each paragraph. In paragraph 1, the author states that “gold used in jewelry is mixed with harder metals” and that these “mixtures...are called alloys.” Paragraph 2 describes how these alloys are measured and labeled. Paragraph 3 explains which alloys are used in making jewelry. From this information, we can determine that the main idea of the passage is best stated in choice **(C)**. Therefore it is correct.

Although the passage does talk about the value of gold, it does not provide information about whether gold is very expensive or not; all we learn is that “the higher the percentage of pure gold used in the alloy, the more valuable and expensive the jewelry will be.” This means **(A)** is incorrect.

The fact that jewelry is stamped with its karat weight is only one fact in paragraph 3. It is too specific to be the main idea of this passage, so **(B)** is incorrect

The passage tells us that colored gold and white gold are made using different metals, but it does not provide any information about which type is more valuable. Therefore **(D)** is incorrect.

2) A

Core Standard: **Integration of Knowledge**

In paragraph 2, we learn that “24 karat is pure gold.” In paragraph 3, we learn that 24K is “too soft for jewelry.” Since 24K gold is pure gold, this means that pure gold is too soft for jewelry and therefore not used to make rings. This makes **(A)** correct.

As explained above, pure gold is stamped with 24K, not 100K, so **(B)** is incorrect.

Pure gold is the only type of gold that is 100% gold and is therefore not an alloy of different metals. This means **(C)** is incorrect.

Paragraph 1 mentions “the natural yellow tone of pure gold,” which tells us that pure gold is not colorless. This makes **(D)** incorrect.

3) A

Core Standard: **Key Ideas and Details**

In paragraph 1, we learn that the other metals mixed with pure gold can be used to “change gold’s color.” This supports **option (I)**.

In paragraph 3, we learn that the price of jewelry increases when a higher amount of pure gold is used in the alloy and decreases when a higher amount of other metals are used. This means using other metals in gold alloys makes gold less expensive. This eliminates **option (II)**.

In paragraph 1, we learn that “gold used in jewelry is mixed with harder metals for strength and durability.” This means the use of other metals in gold alloys makes jewelry stronger and more durable, but the sentence does not imply that it makes gold more flexible. In fact, if other metals make gold stronger and more durable, they are likely to make gold less flexible. This eliminates **option (III)**.

Therefore **(A)** is correct.

4) B

Core Standard: **Craft and Structure**

alloy (*noun*): a mixture of a less costly metal and a more valuable one.

In paragraph 1, an *alloy* is defined as a mixture “of less costly metals with more valuable ones.” Another word for mixture is *blend*. Therefore **(B)** is correct.

A *karat* is “The measure of gold’s purity...” as we learn in paragraph 2. A measurement is not like a mixture, so **(A)** is incorrect.

A mixture is made up of *ingredients*, but the mixture refers to the final blend, not just one of the ingredients. This means **(C)** is incorrect.

A piece of jewelry is considered a fashion accessory, but an *accessory* is not a kind of mixture. This means **(D)** is incorrect.

5) D

Core Standard: **Key Ideas and Details**

In paragraph 2, the author writes, “The higher the karat rating, the higher the amount of pure gold.” This means that in contrast, it is true that the lower the karat rating, the less pure the gold. This supports **option (I)**.

In paragraph 2, the author writes, “All other things being equal, the higher the percentage of pure gold used in the alloy, the more valuable and expensive the jewelry will be.” Since the percentage of pure gold used in the alloy is represented by the karat rating, we can understand that it is true that the higher the karat rating, the more expensive, and therefore, the more valuable, the gold. This supports **option (II)** and **option (III)**.

Therefore **(D)** is correct.