

UB SAT 2009  
Worksheet #15  
Plugging-In the Answer

**Examples** (will be done together)

If 4 less than the product of  $b$  and 6 is 44, what is the value of  $b$ ?

- (A) 2      (B) 4      (C) 6      (D) 8      (E) 14

A store reduces the price of a CD player by 20% and then reduces that price by 15%. If the final price of the CD player is \$170, what was its original price?

- (A) \$140      (B) \$185      (C) \$200      (D) \$250      (E) \$275

**Independent Practice**

1. If  $3x+9=5x+1$ , what is the value of  $x$ ?

- (A) 1      (B) 2      (C) 3      (D) 4      (E) 8

2. If  $3(n-4)=18$ , what is the value of  $n$ ?

- (A)  $\frac{14}{3}$       (B)  $\frac{22}{3}$       (C) 6      (D) 10      (E) 22

3. If  $8+\sqrt{k}=15$ , then  $k=$

- (A) 7      (B) 49      (C) 529      (D)  $\sqrt{7}$       (E)  $\sqrt{23}$

4. If  $\frac{x}{4}=\frac{2x}{a}$  and  $x\neq 0$ , what is the value of  $a$ ?

- (A) 8      (B) 4      (C) 2      (D)  $\frac{1}{2}$       (E)  $\frac{1}{4}$

5. The numerator of a certain fraction is 5 less than the denominator. If the fraction is equal to  $\frac{3}{4}$ , what is the denominator of this fraction?

- (A) 8            (B) 12            (C) 16            (D) 20            (E) 24

6. A bag contains only red marbles, blue marbles, and yellow marbles. The probability of randomly selecting a red marble is  $\frac{1}{4}$ , and the probability of randomly selecting a blue marble is  $\frac{1}{6}$ . Which of the following could be the total number of marbles in the bag?

- (A) 10            (B) 12            (C) 18            (D) 20            (E) 30

7. If the average (arithmetic mean) of 6, 6, 12, 16, and  $x$  is equal to  $x$ , what is the value of  $x$ ?

- (A) 6            (B) 8            (C) 9            (D) 10            (E) 11

8. If the sum of the consecutive integers from -22 to  $x$ , inclusive, is 72, what is the value of  $x$ ?

- (A) 23            (B) 25            (C) 50            (D) 75            (E) 94

9. If  $a$  and  $b$  are positive integers and  $a^2 - b^2 = 7$ , what is the value of  $a$ ?

- (A) 3            (B) 4            (C) 5            (D) 6            (E) 7

10. If  $a$  and  $b$  are positive integers and  $(a^{1/2}b^{1/3})^6 = 432$ , what is the value of  $ab$ ?

- (A) 6            (B) 12            (C) 18            (D) 24            (E) 36

11. Let  $\langle x \rangle$  be defined as  $\langle x \rangle = x^2 - x$  for all values of  $x$ . If  $\langle a \rangle = \langle a - 2 \rangle$ , what is the value of  $a$ ?

- (A) 1            (B)  $\frac{1}{2}$             (C)  $\frac{3}{2}$             (D)  $\frac{6}{5}$             (E) 3

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Answers

1. D

2. D

3. B

4. A

5. D

6. B

7. D

8. B

9. B

10. B

11. C