

UB SAT 2009
Homework #17
Plugging-In
Due: Thurs, Apr 30

1. Sinead has 4 more than three times the number of hats that Maria has. If Maria has x hats, then in terms of x , how many hats does Sinead have?

- (A) $3x + 4$
- (B) $3(x + 4)$
- (C) $4(x + 3)$
- (D) $4(3x)$
- (E) $7x$

2. Jill spent x dollars on pet toys and 12 dollars on socks. If the amount Jill spent was twice the amount she earns each week, how much does Jill earn each week in terms of x ?

- (A) $2(x + 12)$
- (B) $2x + 24$
- (C) $\frac{x}{2} + 12$
- (D) $\frac{x + 12}{2}$
- (E) $\frac{x - 12}{2}$

3. Sally scored a total of $4b + 12$ points in a certain basketball game. She scored the same number of points in each of the game's 4 periods. In terms of b , how many points did she score in each period?

- (A) $b - 8$
- (B) $b + 3$
- (C) $b + 12$
- (D) $4b + 3$
- (E) $16b + 48$

4. Roseanne is 6 years younger than Tom will be in 2 years. Roseanne is now x years old. In terms of x , how old was Tom 3 years ago?

- (A) $x - 7$
- (B) $x - 1$
- (C) $x + 1$
- (D) $x + 3$
- (E) $x + 5$

5. A phone company charges 10 cents per minute for the first 3 minutes of a call and $10 - c$ cent for each minute thereafter. What is the cost, in cents, of a 10-minute phone call?

- (A) $200 - 20c$
- (B) $100c + 70$
- (C) $30 + 7c$
- (D) $100 - 7c$
- (E) $100 - 70c$

6. If x and y are positive integers, and $\sqrt{x} = y + 3$, then $y^2 =$

- (A) $x - 9$
- (B) $x + 9$
- (C) $x^2 - 9$
- (D) $x - 6\sqrt{x} + 9$
- (E) $x^2 - 6\sqrt{x} + 9$

7. If cupcakes are on sale at 8 for c cents, and gingerbread squares are on sale at 6 for g cents, what is the cost, in cents, of 2 cupcakes and 1 gingerbread square?

- (A) $8c + 3g$
- (B) $\frac{cg}{3}$
- (C) $\frac{8c + 6g}{3}$
- (D) $\frac{8c + 3g}{14}$
- (E) $\frac{3c + 2g}{12}$

8. If the side of a square is $x + 1$, then the diagonal of the square is

- (A) $x^2 + 1$
- (B) $2x + 2$
- (C) $x\sqrt{2} + \sqrt{2}$
- (D) $x^2 + 2$
- (E) $\sqrt{2x} + \sqrt{2}$