- (1) What are the solutions to the equation $x^2 + 16x = 52$?
- (1) $x = 8 \pm 2\sqrt{29}$
- (1) $x = -8 \pm 2\sqrt{3}$ (2) $x = -8 \pm 2\sqrt{3}$ (3) $x = -8 \pm 2\sqrt{29}$ (4) $x = 8 \pm 2\sqrt{3}$

- (2) Which equation has the same solution as $x^2 14x + 47 = 0$
- $(1) (x+7)^2 = 96$ $(2) (x-7)^2 = 96$ $(3) (x+7)^2 = 2$ $(4) (x-7)^2 = 2$

(3) The method of completing the square was used to solve the equation $3x^2 - 30x + 45 = 0$. Which equation is a correct step when using this method?

$$(1) (x-5)^2 = -20$$

$$(2) (x+5)^2 = 20$$

$$(3) (x+5)^2 = -10$$

$$(4) (x-5)^2 = 10$$

$$(2) (x+5)^2 = 20$$

$$(3)(x+5)^2 = -10$$

$$(4) (x-5)^2 = 10$$

(4) When directed to solve a quadratic equation by completing the square, Sam arrived at the equation $(x-\frac{5}{2})^2=\frac{133}{4}$. Which equation could have been the original equation given to Sam?

$$(1) x^2 + 5x - 27 = 0$$

(2)
$$x^2 - 5x + 7 = 0$$

(3) $x^2 + 5x + 7 = 0$

(3)
$$x^2 + 5x + 7 = 0$$

$$(4) x^2 - 5x - 27 = 0$$