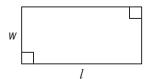
ALGEBRA I FORMULA SHEET

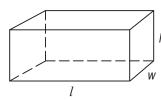
Formulas that you may need to solve questions on this exam are found below. You may use calculator π or the number 3.14 as an approximation of π .

Rectangle



$$A = lw$$
$$P = 2l + 2w$$

Rectangular Prism



$$V = lwh$$

Linear Equations

Slope:
$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

Point-Slope Form:
$$(y-y_1) = m(x-x_1)$$

Slope-Intercept Form:
$$y = mx + b$$

Standard Form:
$$Ax + By = C$$

Arithmetic Properties

Additive Inverse:
$$a + (-a) = 0$$

Multiplicative Inverse:
$$a \cdot \frac{1}{a} = 1$$

Commutative Property:
$$a+b=b+a$$

Associative Property:
$$(a+b)+c=a+(b+c)$$

 $(a \cdot b) \cdot c=a \cdot (b \cdot c)$

Identity Property:
$$a + 0 = a$$

 $a \cdot 1 = a$

Distributive Property:
$$a \cdot (b+c) = a \cdot b + a \cdot c$$

 $a \cdot (b-c) = a \cdot b - a \cdot c$

Multiplicative Property of Zero:
$$a \cdot 0 = 0$$

If
$$a = b$$
, then $a + c = b + c$

Multiplicative Property of Equality:

If
$$a = b$$
, then $a \cdot c = b \cdot c$

ALGEBRA I CONSTRUCTED-RESPONSE QUESTIONS

GENERAL DESCRIPTION OF SCORING GUIDELINES

4 Points

- The response demonstrates a *thorough* understanding of the mathematical concepts and procedures required by the task.
- The response provides correct answer(s) with clear and complete mathematical procedures shown
 and a correct explanation, as required by the task. Response may contain a minor "blemish" or
 omission in work or explanation that does not detract from demonstrating a thorough understanding.

3 Points

- The response demonstrates a *general* understanding of the mathematical concepts and procedures required by the task.
- The response and explanation (as required by the task) are mostly complete and correct. The
 response may have minor errors or omissions that do not detract from demonstrating a
 general understanding.

2 Points

- The response demonstrates a *partial* understanding of the mathematical concepts and procedures required by the task.
- The response is somewhat correct with partial understanding of the required mathematical concepts and/or procedures demonstrated and/or explained. The response may contain some work that is incomplete or unclear.

1 Point

 The response demonstrates a minimal understanding of the mathematical concepts and procedures required by the task.

0 Points

The response has no correct answer and insufficient evidence to demonstrate any understanding
of the mathematical concepts and procedures required by the task.