

# Algebra I

## Pre-Test

### Introduction

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The pre-test that follows is designed to identify areas where you can improve your skills before or after taking the Algebra I end-of-course test. This pre-test will be similar in format to the end of course SATP test for Algebra I.

#### Directions

Read the directions on the following page. These directions should be similar to what you will see on the actual SATP for Algebra I. Once you have completed this pre-test, circle the questions you answered incorrectly on the pre-test evaluation chart on page 26. For each question that you missed on the pre-test, review the corresponding sections in the book as given in the evaluation chart. Read the instructional material, do the practice exercises, and take the section review tests at the end of each section.

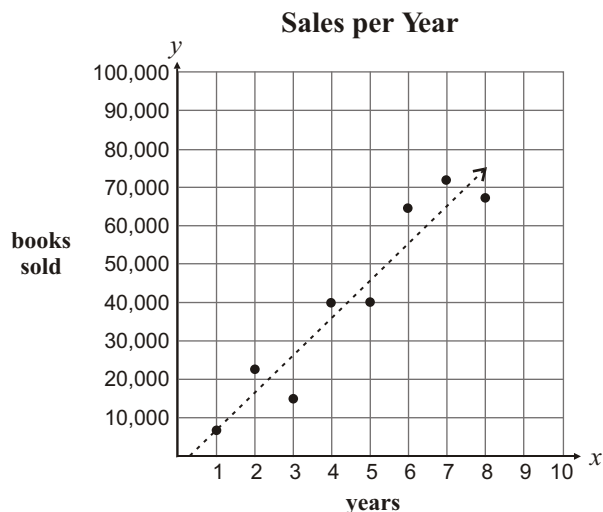
#### Purpose of the Pre-Test

The following pre-test can be used as practice for the actual SATP Algebra I test, but it is primarily a diagnostic tool to help you identify which skills you can improve in order to prepare better for the actual test. Any pre-test question answered incorrectly may identify a skill needing improvement or mastery. Review the corresponding skill(s) indicated in the Pre-Test Evaluation Chart by reading the instructional material on the given pages and completing the practice exercises and reviews. By reviewing each skill, you will improve mastery of the material to be tested on the SATP Algebra I test and potentially increase the score you receive on that test. (The practice tests, which are given in separate booklets, are provided to give you additional practice taking tests similar to the actual SATP Algebra I test.)

#### Scoring on the Actual SATP for Algebra I

The actual test that you will take to pass the Algebra I course will consist of 65 multiple-choice questions. Out of these 65 multiple-choice questions, only 53 questions will be scored. The scorable questions are pre-determined. The other 12 multiple-choice questions embedded throughout the test are field-test questions that will not be scored. You will not know which questions will be scored and which ones will not, so you should answer each and every question as if it will be scored.

58. A growing publishing company plots the number of books sold each year for its first 8 years in business. The data is shown on the scatter plot below.

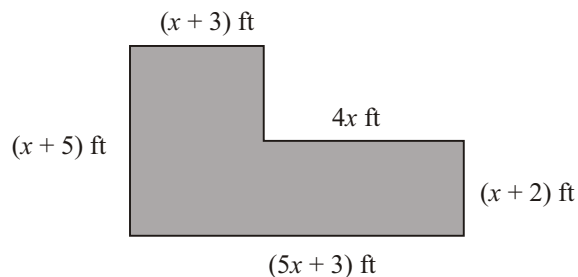


Based on the trend shown in the line-of-best fit, which is the closest to the expected number of books sold in the tenth year?

- A 75,000
- B 82,000
- C 94,000
- D 97,000

(A) (B) (C) (D)

60. The figure below is made up of two rectangles.



What is the total area, in square feet, of the figure?

- A  $12x + 16$
- B  $5x^2 + 23$
- C  $5x^2 + 8x + 15$
- D  $5x^2 + 16x + 15$

(A) (B) (C) (D)

59. Which of the following is a factor of  $6x^2 + 7x - 5$ ?

- A  $(2x - 1)$
- B  $(2x + 1)$
- C  $(3x - 5)$
- D  $(6x + 1)$

(A) (B) (C) (D)

61. If the area of a square is  $x^2 - 6x + 9$ , then what is the length of one of the sides in terms of  $x$ ?

- A  $x + 3$
- B  $x - 3$
- C  $x - 6$
- D  $x - 9$

(A) (B) (C) (D)

62. Which of the following is equivalent to the expression shown below?

$$\frac{16a^{-1}b^3c^2}{24a^{-3}b^{-1}c^5}$$

- A  $\frac{2a^2b^4}{3c^3}$   
B  $\frac{2b^4}{3a^4c^3}$   
C  $\frac{2a^2}{3b^2c^3}$   
D  $\frac{2a^4b^4}{3c^7}$

(A) (B) (C) (D)

64. Which of the following is equivalent to the expression below?

$$\frac{3x^2y - xy + 2xy^2}{xy}$$

- A  $3x + 2y$   
B  $3x^3y^2 - x^2y^2 + 2x^2y^3$   
C 5  
D  $3x - 1 + 2y$

(A) (B) (C) (D)

63. Line segment  $\overline{UV}$  has a midpoint of  $(\frac{5}{2}, 8)$  on a coordinate plane. If point  $U$  is located at  $(1, 5)$ , then which ordered pair represents the location of point  $V$ ?

- A  $(2, 11)$   
B  $(4, 11)$   
C  $(4, -1)$   
D  $(\frac{3}{2}, 11)$

(A) (B) (C) (D)

65. Which of these pairs of linear equations represent two lines that are perpendicular?

- A  $y = \frac{2}{5}x + 4$  and  $y = \frac{5}{2}x - 2$   
B  $y = -\frac{1}{3}x + 2$  and  $y = \frac{1}{3}x + 2$   
C  $y = \frac{2}{3}x - 4$  and  $y = -\frac{3}{2}x + 3$   
D  $y = 3x + 1$  and  $y = 3x + 4$

(A) (B) (C) (D)