

TEST ITEM FILE

(DOWNLOAD ONLY)

COLLEGE ALGEBRA

EIGHTH EDITION

COLLEGE ALGEBRA

ESSENTIALS

SIXTH EDITION

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Blitzer College Algebra 8e
Chapter 0 Test Item File

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Evaluate the algebraic expression for the given value or values of the variable(s).

1) $8x + 6$; $x = 5$

A) 14

B) 46

C) 80

D) 34

Objective: (1) Evaluate Algebraic Expressions

2) $5x + 6$; $x = -2$

A) -4

B) -16

C) 16

D) 4

Objective: (1) Evaluate Algebraic Expressions

3) $2(x + 4) + 19$; $x = -11$

A) 5

B) -17

C) 55

D) -5

Objective: (1) Evaluate Algebraic Expressions

4) $3x^2 + 4y$; $x = 9$ and $y = 7$

A) 1,785

B) 271

C) 183

D) 757

Objective: (1) Evaluate Algebraic Expressions

5) $(x + 4y)^2$; $x = 3$ and $y = 3$

A) 15

B) 49

C) 30

D) 225

Objective: (1) Evaluate Algebraic Expressions

6) $6 + 6(x - 7)^3$; $x = 9$

A) 96

B) 54

C) -42

D) 18

Objective: (1) Evaluate Algebraic Expressions

7) $x^2 - 3(x - y)$; $x = 6$ and $y = 4$

A) -42

B) 14

C) 22

D) 30

Objective: (1) Evaluate Algebraic Expressions

8) $\frac{9(x + 5)}{2x + 4}$; $x = 7$

A) 6

B) 12

C) 1

D) $\frac{17}{2}$

Objective: (1) Evaluate Algebraic Expressions

9) $\frac{y - 7x}{2x + xy}$; $x = -3$ and $y = 4$

A) $-\frac{4}{3}$

B) $-\frac{17}{6}$

C) $-\frac{25}{18}$

D) $\frac{17}{18}$

Objective: (1) Evaluate Algebraic Expressions

Solve.

- 10) The formula $C = \frac{5}{9}(F - 32)$ expresses the relationship between Fahrenheit temperature, F , and Celsius temperature, C . Use the formula to convert 59°F to its equivalent temperature on the Celsius scale.
A) 51°C B) 15°C C) 3°C D) 49°C

Objective: (2) Use Mathematical Models

- 11) A stone is dropped from a tower that is 810 feet high. The formula $h = 810 - 16t^2$ describes the stone's height above the ground, h , in feet, t seconds after it was dropped. What is the stone's height 3 seconds after it is released?
A) 676 ft B) 666 ft C) 641 ft D) 691 ft

Objective: (2) Use Mathematical Models

- 12) If a rock falls from a height of 80 meters above the ground, the height H (in meters) after x seconds can be approximated using the formula $H = 80 - 4.9x^2$. What is the height of the rock after 2 seconds?
A) -16.04 m B) 70.2 m C) 60.4 m D) 300.4 m

Objective: (2) Use Mathematical Models

- 13) As the relative humidity increases, the temperature seems higher than it is. The formula $T = 0.118x + 59.63$ approximates the apparent temperature for an actual temperature of 65°F , where x is the relative humidity. What is the apparent temperature (to the nearest degree) for a relative humidity of 50%?
A) 60°F B) 66°F C) 110°F D) 352°F

Objective: (2) Use Mathematical Models

- 14) The winning times (in seconds) in a speed-skating event for men can be represented by the formula $T = 46.96 - 0.096x$, where x represents the year, with $x = 0$ corresponding to 1920. (For example in 1992, x would be $1992 - 1920 = 72$.) According to the formula, what was the winning time in 1999? Round to the nearest hundredth.
A) 39.38 sec B) 41.30 sec C) 40.34 sec D) 3,702.26 sec

Objective: (2) Use Mathematical Models

- 15) It is estimated that y , the number of items of a particular commodity (in millions) sold in the United States in year x , where x represents the number of years since 1990, is given by the formula $y = 1.29x + 4.37$. That is, $x = 0$ represents 1990, $x = 1$ represents 1991, and so on. According to the formula, how many items sold in 1999?
A) 4.37 millions B) 50.94 millions C) 17.27 millions D) 15.98 millions

Objective: (2) Use Mathematical Models

Find the intersection of the two sets.

- 16) $\{2, 7, 5, 8\} \cap \{5, 6, 2\}$
A) $\{2\}$ B) $\{2, 5\}$ C) $\{2, 5, 8, 7, 6\}$ D) \emptyset

Objective: (3) Find the Intersection of Two Sets

- 17) $\{2, 7, 8\} \cap \{5, 11\}$
A) $\{2, 8\}$ B) $\{7, 8\}$ C) \emptyset D) $\{2, 5, 8, 7, 11\}$

Objective: (3) Find the Intersection of Two Sets

- 18) $\{4, 6, 7, 9\} \cap \emptyset$
A) $\{4, 6, 7, 9\}$ B) $\{7, 9\}$ C) \emptyset D) $\{4, 6\}$

Objective: (3) Find the Intersection of Two Sets