

Next Generation ACCUPLACER Score Quantitative Reasoning Algebra and Statistics

Section: ACCUPLACER Next Generation Quantitative Reasoning Algebra and Statistics Exams • Total Questions: 10 •

Format: Verified Q&A

1. For all positive integers n , let $\sigma(n)$ be defined as the sum of the positive divisors of n . For example, $\sigma(9) = 1 + 3 + 9 = 13$. Which of the following is equal to $\sigma(16) - \sigma(5)$?

- (A) 41
 - (B) 3
 - (C) 4
 - (D) 5
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2. A record store sold 100 copies of a CD in January. In February, the store's sales of the CD increased by 10 percent over the January sales. In March, the store sold 20 percent more copies of the CD than it sold in February. How many copies of the CD did the store sell in March?

- (A) 120
 - (B) 122
 - (C) 130
 - (D) 132
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3. A parking lot is in the shape of a square and covers 1,000 square meters. Of the following, which is closest to the length, in meters, of one side of the parking lot?

- (A) 10
 - (B) 30
 - (C) 50
 - (D) 100
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4. Which of the following is equivalent to the inequality above?

$$8-2x > 2x-8$$

- (A) $x > -4$
 - (B) $x > -2$
 - (C) $x < 2$
 - (D) $x < 4$
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5. The value of four functions for different values of x are shown in the table above. If the patterns continue, which function will have the largest value when x is equal to 100,000?

- (A) $A(x)$
 - (B) $B(x)$
 - (C) $C(x)$
 - (D) $D(x)$
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6. Which of the following is an equation of the line graphed above?

- (A) $y = 31x + 1$
 - (B) $y = 31x - 1$
 - (C) $y = 3x - 1$
 - (D) $y = -3x - 9$
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7. If $2^x = 8^y$, where x and y are positive integers, which of the following is equivalent to $8^{(x+y)}$?

- (A) $2^{(3x)}$
 - (B) $2^{(4x)}$
 - (C) $2^{(3x)^2}$
 - (D) $2^{(3x)} + 2^x$
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8. George sells previously owned cars. Each month his earnings, in dollars, are given by the function $m(x) = 7220 + 50x$, where x is the number of cars George sells that month. One month his total monthly earnings were \$7,620. How many cars did George sell that month?

- (A) 6
 - (B) 7
 - (C) 8
 - (D) 12
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9. Which expression can be factored into the form $(ax+by)^2$ where a and b are real number constants?

- (A) $36x^2-49y^2$
 - (B) $81x^2+64y^2$
 - (C) $4x^2+20xy+25y^2$
 - (D) $16x^2-24xy-9y^2$
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10. Fred, Norman, and Dave own a total of 128 comic books. If Dave owns 44 of them, what is the average (arithmetic mean) number of comic books owned by Fred and Norman?

- (A) 42
- (B) 44
- (C) 46
- (D) 48