

TSIA2 Mathematics Diagnostic Answer Key

Section: TSIA2 Math Exams • Total Questions: 10 • Format: Verified Q&A

1. Which of the following is equivalent to $12x + 8$?

- (A) $4(3x+2)$
 - (B) $4(3x+8)$
 - (C) $4(3x+2x)$
 - (D) $20x$
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2. What is the range of her scores?

- (A) 100
 - (B) 120
 - (C) 440
 - (D) 2,250
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3. The average of 4 numbers is 9. If one of the numbers is 7, what is the sum of the other 3 numbers?

- (A) 2
 - (B) 12
 - (C) 29
 - (D) 36
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4. Which equation is a correct way to calculate x ?

- (A) $\sin x = 5,000 / 7,000$
 - (B) $\sin x = 7,000 / 5,000$
 - (C) $\tan x = 5,000 / 7,000$
 - (D) $\tan x = 7,000 / 5,000$
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5. Which of the following must be true?

- (A) $4x-3=26$
 - (B) $4x-1=26$
 - (C) $5x-1=26$
 - (D) $5x+1=26$
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6. In the figure above, what is the average (arithmetic mean) of w , x , y , and z ?

- (A) 90
 - (B) 100
 - (C) 120
 - (D) It cannot be determined from the information given.
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7. If the values of x and y are negative, which of the following values must be positive?

- (A) $x^2 - y^2$
 - (B) x/y
 - (C) $x + y$
 - (D) $x - y$
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8. If the combined amount of donations collected by Kevin, Fran, and Brooke exceeded the amount Lamar collected by \$250, what was the total amount of donations collected by all five club members?

- (A) \$500
 - (B) \$1,200
 - (C) \$2,500
 - (D) \$3,200
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9. If the function g is defined by $g(x) = x/(x+1)$, which of the following is true?

- (A) $g(10) < g(20)$
 - (B) $g(20) < g(10)$
 - (C) $g(0) = 1$
 - (D) $g(1) = 0$
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10. If a number from set M is selected at random, what is the probability that the number selected will be a factor of 12?

- (A) 0.1
 - (B) 0.2
 - (C) 0.4
 - (D) 0.5
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