

ALGEBRA I INDIVIDUAL TEST JANUARY 23, 1993

ANSWER "e" IS "NOTA", NONE OF THE ABOVE.

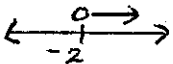
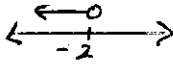
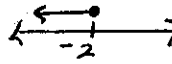
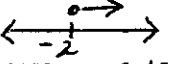
- Let @ be defined as follows: $a @ b = 2a + b$.
Find $3 @ 5$:
a) 8 b) 11 c) 13 d) 16 e) NOTA
- For what integers does $(x + y)^2 = x^2 + y^2$?
a) all integers b) no integers c) positive integers only
d) negative integers only e) NOTA
- Let R be Randy's age 3 years from now. Write an expression for Randy's age now.
a) R b) $R + 3$ c) $R - 3$ d) $3R$ e) NOTA
- Evaluate: $\frac{(-9)(-8) + (-3)}{25}$
a) $2 \frac{19}{25}$ b) 3 c) $-\frac{69}{25}$ d) -3 e) NOTA
- Simplify: $[6(x + 4) - 12] - [5(x - 8) + 11]$
a) $x - 53$ b) $x - 37$ c) $x + 21$ d) $x + 41$ e) NOTA
- Evaluate: $\frac{4z^2 - 10z + 4}{y^2 - z^2}$ for $z = -3$ and $y = 4$
a) $4 \frac{14}{25}$ b) 10 c) $16 \frac{6}{7}$ d) $25 \frac{3}{7}$ e) NOTA
- $4x + (2y + 3) = 4x + (3 + 2y)$ is an example of the _____ axiom.
a) associative b) commutative c) transitive
d) symmetric e) NOTA
- The directions for a problem were "Evaluate", which one of the following could have been an answer.
a) $4x + y$ b) $y = 7x$ c) $x < 8y$ d) 72 e) NOTA
- If $3k + 2 = a$, write $6k + 9$ in terms of a.
a) $2a$ b) $2a + 4\frac{1}{2}$ c) $2a + 5$ d) $2a + 9$ e) NOTA
- $g(t) = (t - 2)^2$ find $g(3) + g(4)$
a) 3 b) 5 c) 7 d) 25 e) NOTA
- $\sqrt{7} > ? > \sqrt{6}$
a) 1.5 b) 2.5 c) 3.25 d) 6.5 e) NOTA
- Solve for L: $S = \frac{n}{2}(a + L)$
a) $S - \frac{n}{2} - a = L$ b) $L = \frac{nS}{2a}$ c) $L = \frac{2S}{na}$ d) $L = \frac{2S - an}{n}$ e) NOTA

$a \neq 0$
 $n \neq 0$
 $a \neq 0$
 $n \neq 0$

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13. ALL OF THE FOLLOWING ARE PRIME EXCEPT-
 a) 1 b) 2 c) 3 d) 173 e) NOTA
14. SOLVE $-2(t - 5) - 1 < 5t + 2(1 - t)$
 a) $t \geq 7/5$ b) $t \leq 7/5$ c) $t \leq -13/5$ d) $t \geq -13/5$ e) NOTA
15. LET $A = \{-2, -4, -6, -8\}$ $B = \{-6, -7, -8\}$, THEN $A \cap B = ?$
 a) $\{-2, -4, -6, -7, -8\}$ b) $\{-6, -8\}$ c) $\{-2, -4, -7\}$ d) \emptyset e) NOTA
16. SOLVE AND WRITE THE SOLUTION AS AN INTERVAL:
 $7 - 3y \geq 6 - 4y > 4 - 3y$
 a) $(-1, 2)$ b) $[-1, 2]$ c) $(-1, 2]$ d) $[-1, 2)$ e) NOTA
17. SIMPLIFY: $(z/2 - 3/2) + (z/4 + 1/2) - (2z/3 + 3/4)$
 a) $z/3 - 5/6$ b) $-5/6$ c) $z/12 - 7/4$ d) $z + \frac{1}{2}$ e) NOTA
18. SOLVE: $7 + 3[-s - 3(s+5)] = 5(7 - 2s) + 5$
 a) $s = -39$ b) $s = -5\frac{1}{2}$ c) $s = 6\frac{1}{2}$ d) $s = 37\frac{1}{2}$ e) NOTA
19. MULTIPLY: $(2x - 3t)^2$
 a) $4x^2 - 9t^2$ b) $4x^2 + 9t^2$ c) $4x^2 - 12xt + 9t^2$
 d) $4x^2 + 12xt + 9t^2$ e) NOTA
20. SIMPLIFY: $2a^{-2}$
 a) $1/(2a^2)$ b) $4a^2$ c) $4/a^2$ d.) $2/a^2$ e) NOTA
21. WHICH OF THE FOLLOWING IS NOT a polynomial?
 a) $2x^2$ b) $2xy + 3ab$ c) $3/x + y/4$ d) $x^2/3 + 4y^2$ e) NOTA
22. IN THE EXPRESSION $3x^2 + 2x + 7$, $2x$ is the -
 a) constant term b) linear term c) quadratic term
 d) coefficient e) NOTA
23. $24v^2 + 5v - 36$ FACTORED IS_
 a) $(12v - 6)(2v + 6)$ b) $(4v - 6)(6v + 6)$ c) $(8v - 9)(3v + 4)$
 d) $(4v - 3)(6v + 12)$ e) NOTA
24. WHICH OF THE FOLLOWING IS A REAL NUMBER?
 a) $\sqrt{-4}$ b) $\frac{x+1}{x+1}$, if $x = -1$ c) $(-16)^{-\frac{1}{2}}$
 d) -4^{-2} e) NOTA
25. WHICH OF THE FOLLOWING IS NOT in standard form?
 a) $y = 2x + 7$ b) $y^2 - 3y + 2 = 0$ c) $2x + 3y = 5$
 d) $x - y = 1$ e) NOTA

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26. LET A BE THE SOLUTION OF $x/3 = 12$ AND B BE THE SLOPE OF THE LINE $y = 2x + 3$, THEN AB EQUALS -
a) 8 b) 12 c) 72 d) 108 e) NOTA
27. WRITE 0.0046 IN SCIENTIFIC NOTATION.
a) 4.6×10^4 b) 4.6×10^{-4} c) 4.6×10^{-3} d) 4.6×10^3
e) NOTA
28. $-2x + 1 > 5$ WHICH GRAPH IS THE SOLUTION SET FOR THIS INEQUALITY?
a)  b)  c)  d)  e) NOTA
29. MR. EWING HAS $\frac{1}{2}$ OF HIS PROPERTY INVESTED IN LAND, $\frac{1}{10}$ IN STOCK $\frac{1}{20}$ IN UTENSILS, AND THE REMAINDER, WHICH IS \$3,500, IN A SAVINGS ACCOUNT IN THE BANK. HOW MUCH IS MR. EWING WORTH?
a) 10,000 b) 70,000 c) 100,000 d) 700,000 e) NOTA
30. AT A CERTAIN TIME OF THE DAY THE SHADOW OF A 68-FOOT TELEGRAPH POLE WAS 85 FEET LONG. AT THE SAME TIME THE SHADOW OF A TREE WAS 123 FEET LONG. FIND THE HEIGHT OF THE TREE.
a) 47 b) 98.4 c) 153.75 d) 276 e) NOTA