Algebra 1 – 3rd Edition – On-line Test 22 – July 2005

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1. Are the equations y = 2x + 5 and y = 5x + 2 consistent, inconsistent, or dependant ?

[A] consistent [B] inconsistent [C] dependant

[D] Both A and C [E] None of these

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2. *Given* $f(x) = 3x^3 - 4x^2 + x - 1$, *what is* $f(2)$?

[A] 0 [B] - 16 [C] 43 [D] - 1 [E] None of these

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3. Find the domain of the function $f(x) = \sqrt{x + 10}$

[A] $\{ x \in \text{Real Numbers} \mid x \geq 0 \}$ [B] $\{ x \in \text{Real Numbers} \mid x \geq 10 \}$

[C] $\{ x \in \text{Real Numbers} \mid x \leq 0 \}$ [D] $\{ x \in \text{Real Numbers} \mid x \geq -10 \}$

[E] None of these

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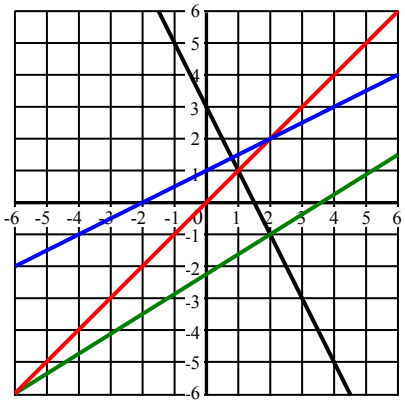
4. Which ordered pair is the solution of the graphed equations $y = -2x + 3$ *and* $y = \frac{5}{8}x - \frac{9}{4}$?



[A] (1, 1) [B] (- 2, 0) [C] (2, - 1)

[D] (- 6, - 6) [E] None of these

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5. Rob and Charlie have 36 coins that are nickels and dimes. If the value of the coins is $3.00, how many more dimes than nickels do they have ?

[A] 0 [B] 12 [C] - 6 [D] - 12 [E] None of these

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6. Multiply and simplify: $\left(4\sqrt{12}\right)\left(3\sqrt{6}\right)$

[A] $12\sqrt{6}$ [B] $14\sqrt{2}$ [C] $72\sqrt{2}$ [D] $7\sqrt{18}$ [E] None of these

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7. Which set of ordered pairs is a function ?

[A] (0, 0), (0, 3) [B] (1, 1), (1, - 1) [C] (- 2, - 2), (- 2, 2)

[D] (5, 5), (- 5, 5) [E] None of these

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8. Divide: $(4y^3 + 2y^2 - 3y - 4) \div y$

[A] $4y^2 + 2y - 3$ [B] $(4y^2 + 2y - 3) - 4$ [C] $(-4y^2 - 2y + 3) + 4$

[D] $4y^2 + 2y - 3 - \frac{4}{y}$ [E] None of these

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9. Simplify completely: $\sqrt{(64 + 16)}$

[A] 12 [B] $4\sqrt{20}$ [C] $4\sqrt{5}$ [D] 32 [E] None of these

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10. George has $3.60 in quarters and dimes. If he has 13 more quarters than dimes, how many dimes does he have ?

[A] 3.5 [B] 7 [C] 15 [D] 1 [E] None of these

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11. Find the ***range*** of the data in this stem-and-leaf plot.

[A] 209 [B] 120 [C] 89 [D] 136 [E] None of these

12. What is the ***median*** in this stem-and-leaf plot ?

[A] 158 [B] 136 [C] 154 [D] 120 [E] None of these

Stem	Leaf
12	5, 2, 3, 0, 0
13	4, 3, 1, 5, 6, 2
15	2, 7, 8
18	4, 3
19	3, 3, 4
20	9, 0

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13. $R_oT_o = R_BT_B + 16$, $R_o + R_B = 1$, $T_o = 1$, $T_B = -6$. Find R_o and R_B

[A] $R_o = -2$, $R_B = 3$ [B] $R_o = -3$, $R_B = 2$ [C] $R_o = 2$, $R_B = -3$

[D] $R_o = 3$, $R_B = -2$ [E] None of these

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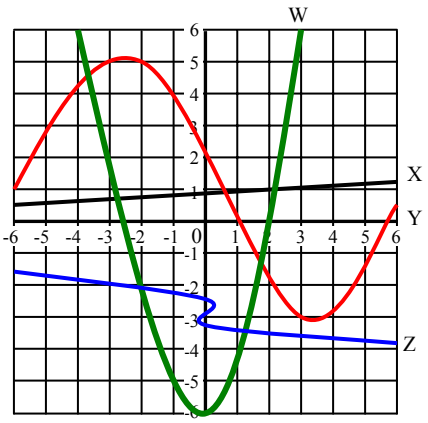
14. Which diagram in the graph at right is ***not*** a function?



[A] W [B] X [C] Y [D] Z [E] None of these

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15. The product of 7 and a number is 12 greater than 5 times the number. What is the number ?

[A] 1 [B] 16 [C] 35 [D] - 8 [E] None of these

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16. Divide: $(\ 6x^3 - 3x^2 - 14x - 8\ ) \div (\ x - 2\ )$

[A] $6x^2 - 3x - 14 - \dfrac{8}{x-2}$ [B] $-6x^2 - 9x - \dfrac{18}{x-2}$ [C] $6x^2 - 15x - 44 - \dfrac{16}{x-2}$

[D] $6x^2 + 9x + 4$ [E] None of these

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17. Multiply and simplify: $3\sqrt{6}\left(2\sqrt{24} + 3\sqrt{2}\right)$

[A] $72 + 18\sqrt{3}$ [B] $30\sqrt{6} + 18\sqrt{3}$ [C] $6\sqrt{134} + 18\sqrt{3}$

[D] $6\sqrt{134} + 3\sqrt{8}$ [E] None of these

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18. Solve by factoring: $x^2 = x + 20$

[A] x = 5, 4 [B] x = 20 [C] $x = 4\sqrt{5}$ [D] x = - 4, - 5 [E] None of these

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19. Find three consecutive integers so that the sum of the first and third is 64.

[A] 1, 3, 5 [B] 2, 3, 32 [C] 31.5, 32.5, 33.5 [D] 31, 32, 33 [E] None of these

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20. Solve by factoring: $12 = -7x - x^2$

[A] $x = \frac{-7-\sqrt{97}}{2}, \frac{-7+\sqrt{97}}{2}$ [B] $x = \frac{7+\sqrt{97}}{2}, \frac{7-\sqrt{97}}{2}$

[C] $x = 0, \sqrt{12}$ [D] $x = -3, -4$ [E] None of these
