

المملكة العربية السعودية

وزارة التعليم

MINISTRY OF EDUCATION



لكل المهتمين و المهتمات
بدروس و مراجع الجامعية

هام

مدونة المناهج السعودية eduschool40.blog

78. If the right triangle with $\theta = 30^\circ$, Hypotense = 10cm, then the side opposite

- A) 5 B) 10 C) 2.5 D) $5\sqrt{3}$

79. If the right triangle with Hypotense = 10cm, side opposite = 8cm, Find side adjacent

- A) 2 B) 12 C) 6 D) 36

80. The limit of $f(x)$ as x approaches a is L
is equivalent to $\lim_{x \rightarrow a} f(x) = L$

- A) True B) False

81. From Properties of Limits

$$\lim_{x \rightarrow a} f(x) - \lim_{x \rightarrow a} g(x) = \lim_{x \rightarrow a} [f(x) - g(x)]$$

- A) True B) False

82. Find

A) -9 $\lim_{x \rightarrow -2} (2x - 5)$ B) 9 C) 6 D) -1

83. Find

$\lim_{x \rightarrow 5} \frac{2x-9}{x-3}$ A) 2 B) -2 C) $\frac{1}{2}$ D) $-\frac{1}{2}$

84. Find

A) 6 $\lim_{x \rightarrow 3} \frac{x^2-9}{x-3}$ B) -6 C) 8 D) -8

85. Find

A) -5 $\lim_{x \rightarrow -3} \frac{x^2+x-6}{x+3}$ B) 6 C) -6 D) 5

54. The domain of $f(x) = 3$ is

- A) \mathbb{R} B) $(-\infty, 0]$ C) $(0, \infty)$ D) $\mathbb{R} - \{3\}$

55. The range of $f(x) = 3$ is

- A) \mathbb{R} B) $(-\infty, 0]$ C) $\{3\}$ D) $\mathbb{R} - \{3\}$

56. If $f(x) = 3$, then $f(-1) = 3$

- A) True B) False

57. The domain of $f(x) = 3^x$ is

- A) \mathbb{R} B) $(-\infty, 0]$ C) $(0, \infty)$ D) $\mathbb{R} - \{3\}$

58. The range of $f(x) = 3^x$ is

- A) \mathbb{R} B) $(-\infty, 0]$ C) $(0, \infty)$ D) $\mathbb{R} - \{3\}$

59. If $3^x = 5^x$ then $x = 0$

- A) True B) False

60. If $3^{4x-6} = 9$ then $x =$

- A) 1 B) 2 C) 3 D) 4

61. Solve for x : $x^2 e^x - 5x e^x = 0$

- A) $x = 5$ B) $x = 0$ C) $x = 0, 5$ D) $x = 0, -5$

1. The vertex of the function $f(x) = 2(x - 3)^2 + 4$ is

- A. (3, -4) B. (4, 3) C. (3, 4)

2. The domain of $g(x) = \frac{2x+9}{x-3}$ is

- A. $[3, \infty)$ B. $(-\infty, \infty)$ C. $(-\infty, 3) \cup (3, \infty)$

3. If $f(x) = 2x + 3$ and $g(x) = x^2 - 4$, then $\left(\frac{f}{g}\right)(x) =$

- A. $\frac{2x+3}{x^2-4}$ B. $x^2 + 2x - 1$ C. $\frac{x^2-4}{2x+3}$

4. The function $g(x) = x^3 + 1$ is

- A. odd B. even C. neither

5. The x intercept of the function $f(x) = \frac{3x-12}{2x+4}$ is

- A. 0 B. 4 C. -2

6. The axis of the function $g(x) = 3(x + 5)^2 - 2$ is

- A. $x = -5$ B. $x = 5$ C. $x = -2$

7. The function $h(x) = 2x + 2$ is

- A. Decreasing B. Constant C. Increasing

8. The range of $f(x) = -(x - 2)^2 + 6$ is

- A. $(-\infty, 6]$ B. $(-\infty, \infty)$ C. $[6, \infty)$

9. If $f(x) = \sqrt{x}$ and $g(x) = 2x + 5$, then $(f \circ g)(x) =$

- A. $2\sqrt{x} + 5$ B. $\sqrt{x} + 2x + 5$ C. $\sqrt{2x + 5}$

10. The y intercept of the function $f(x) = 2x - 5$ is

- A. -2 B. 1 C. -5

11. The domain of $(f - g)(x)$ where $f(x) = \sqrt{x}$ and $g(x) = \sqrt{10 - x}$ is

- A. $[0, 10]$ B. $(-\infty, \infty)$ C. $(0, 10)$

12. The vertex form of $f(x) = 2x^2 - 8x + 4$ is

- A. $4(x - 2)^2 - 4$ B. $2(x - 2)^2 - 4$ C. $2(x - 4)^2 - 2$

13. The function $f(x) = 1 - (x - 2)^2$ is open

- A. upward B. downward

1. $|9| = \dots ?$

- A. -9 B. 9 C. 3

2. $|\sqrt{-2}| = \dots ?$

- A. 2 B. $-\sqrt{2}$ C. $\sqrt{2}$

3. The solution for equation $|x + 2| = 4$ is ...?

- A. $x = -6$ B. $x = -4$ C. $x = -6$ or $x = 2$

4. Write the statement as an absolute value equation or inequality
(x is 4 units from 3) ?

- A. $|x - 3| = 4$ B. $|x + 3| = 4$ C. $|x - 3| \leq 4$

5. The solution for inequality $|x| \leq 7$ is ... ?

- A. $x = \{-7, 7\}$ B. $x = [-7, 7]$ C. $x = (-7, 7)$

6. The solution for inequality $|2x - 1| \geq 3$ is ?

- A. $x \leq 2$ or $x \geq 1$ B. $x = 1$ or $x = -2$ C. $x \leq -1$ or $x \geq 2$

7. The real part of $2 + 5i$ is...?

- A. 2 B. 5 C. $5i$

8. The imaginary part of $8i$ is ... ?

- A. 8 B. 0 C. $8i$

9. The conjugate of 6 is.....?

- A. 0 B. 6 C. $6i$

10. $(3 + 2i) + (6 - 4i) = \dots ?$

- A. $9 + 2i$ B. $9 - 2i$ C. $9 - 6i$

11. $i(1 + i) = \dots ?$

- A. $-1 + i$ B. $1 - i$ C. i

12. Write in standard form $(\frac{1}{4+2i}) \dots ?$

- A. $\frac{1}{5} - \frac{1}{10}i$ B. $\frac{1}{5} + 2i$ C. $4 - 2i$

13. $i^4 = \dots ?$

- A. i B. -1 C. 1

14. If $f(x) = \begin{cases} x & \text{if } -2 \leq x < 1 \\ -x + 2 & \text{if } 1 \leq x \leq 2 \end{cases}$, then $f(1) =$

<input checked="" type="radio"/> A	0	<input checked="" type="radio"/> B	1	<input checked="" type="radio"/> C	-1
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15. If $f(x) = 3x$ and $g(x) = x - 2$, then $(f + g)(x) =$

<input checked="" type="radio"/> A	$4x - 2$	<input checked="" type="radio"/> B	$3x^2 - 6$	C	$2x - 4$
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16. The inverse of $f(x) = \sqrt{x+2}$ is

A.	$f^{-1}(x) = \sqrt{x}$	B.	$f^{-1}(x) = 2 - x^2$	<input checked="" type="radio"/> C	$f^{-1}(x) = x^2 - 2$
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17. The function $f = \{(1,2), (2,4), (3,9)\}$ is not one-to-one

<input checked="" type="radio"/> A	x	True	<input checked="" type="radio"/> B	✓	false
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18. The graphs of f and f^{-1} are symmetric with respect to the line $y = x$

<input checked="" type="radio"/> A	✓	True	<input checked="" type="radio"/> B	false
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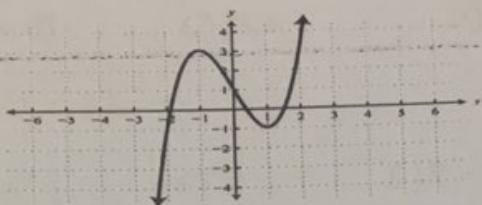
19. The function $f(x) = x^4 + 1$ is odd

<input checked="" type="radio"/> A	True	<input checked="" type="radio"/> B	✓	false
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20. The graph of an even function is symmetric with respect to the y axis

<input checked="" type="radio"/> A	True	✓	<input checked="" type="radio"/> B	false
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47. From the figure, the function is one to one function



A) True

B) False

48. If a function f is one to one then f^{-1} will be exists.

A) True

B) False

49. If f^{-1} exists, then $f(f^{-1}(x)) = f^{-1}(f(x))$

A) True

B) False

50. Find the inverse of the function $f(x) = 3x + 2$.

A) $x(x - 2)$

B) $2(x - 1)$

C) $\frac{x-2}{3}$

D) $2 + 3x$

51. Find the inverse of the function $f(x) = \frac{3}{x+1}$.

A) $x(x - 3)$

B) $3(x - 1)$

C) $\frac{3-x}{x}$

D) $1 + 3x$

52. If $f(3) = 6$ then $f^{-1}(6) = 3$

A) True

B) False

53. let $f = \{(1,4), (2,1)\}$ the range of f^{-1}

A) $\{1,2\}$

B) $(-\infty, \infty)$

C) $\{4,1\}$

D) $R - \{1\}$

14. $\sqrt{-4} = \dots$?

- A. $2i$ B. 2 C. i

15. The solution for the inequality $\sqrt{x^2} < 2$ is ... ?

- A. $[-2, 2]$ B. $(-\infty, 2) \cup (2, \infty)$ C. $(-2, 2)$

16. The equation $x^2 + y^2 = 16$ is not define function:

- A. True B. false

17. The range of the function $S = \{(-2, 1), (-1, 2), (0, 0), (1, 2), (2, 1)\} = :$

- A. $\{-2, -1, 0, 1, 2\}$ B. $\{1, 2, 0\}$ C. \emptyset

18. The domain of the function defined by the equation $y = \sqrt{x - 3}$:

- A. $(-\infty, \infty)$ B. $[-3, \infty)$ C. $[3, \infty)$

19. When $k(x) = \frac{4}{2-x}$ then $9K(x) = \dots$?

- A. 3 B. $\frac{4}{-7}$ C. $\frac{36}{2-x}$

20. If the function $f(x) = x^2 + 5x - 2$, then $f(3) = \dots$?

- A. 22 B. 12 C. -5

Good Luck