

تم تحميل هذا الملف من موقع المناهج الإماراتية



الملف مراجعة الوحدة الأولى unit1 Review

موقع المناهج ← المناهج الإماراتية ← الصف الثاني عشر العام ← رياضيات ← الفصل الأول

روابط مواقع التواصل الاجتماعي بحسب الصف الثاني عشر العام



روابط مواد الصف الثاني عشر العام على تلغرام

[الرياضيات](#)

[اللغة الانجليزية](#)

[اللغة العربية](#)

[التربية الاسلامية](#)

المزيد من الملفات بحسب الصف الثاني عشر العام والمادة رياضيات في الفصل الأول

<a href="#">مراجعة عامة قبل امتحان نهاية الفصل الأول من</a>	1
<a href="#">التوزيع الزمني للفصل الاول</a>	2
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**Choose the correct answer in the following questions:**

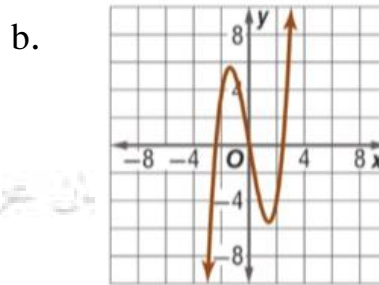
1- Which of the following is the set builder notation that describes the set of all integers multiple of 7?

- a.  $\{x | x \geq 7, x \in \mathbb{Z}\}$       b.  $\{x | x \geq 7n, n \in \mathbb{Z}\}$   
 c.  $\{x | x = 7n, n \in \mathbb{Z}/\{0\}\}$       d.  $\{x | x = 7n, x \in \mathbb{R}\}$

2- One of the following relations doesn't represent y as a function of x:

a.

x	y
-6	-7
2	3
5	8
5	9
9	22



- c.  $2x + 4y = 10$       d.  $y + x^2 = 1$

3- If  $f(x) = 2x^2 - 1$  then  $f(2a) =$

- a.  $4a^2 - 1$       b.  $8a^2 - 1$   
 c.  $-4a^2 - 1$       d.  $3a^2$

4- The domain of the function  $f(x) = \frac{x-1}{x^3-4x}$  is:

- a.  $[-2, 2]$       b.  $(-\infty, -2) \cup (2, \infty)$   
 c.  $\mathbb{R}$  except  $x = -2, x = 2, x = 0$       d.  $\mathbb{R}$  except  $x = -2, x = 2$



## Review Unit 1

5- The domain of the function  $f(x) = \frac{2}{x\sqrt{1-x^2}}$  is:

- a.  $(-1, 1)$       b.  $[-1, 1)$       c.  $[-1, 1]$       d.  $(-1, 0) \cup (0, 1)$

6- **PUBLIC TRANSPORTATION** The nationwide use of public transportation can be modeled using the following function. The year 1996 is represented by  $t = 0$ , and  $P(t)$  represents passenger trips in millions.

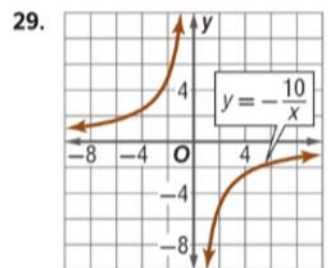
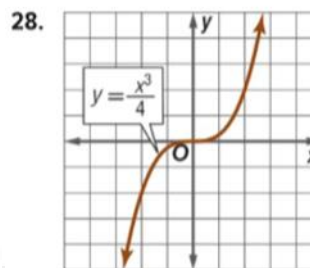
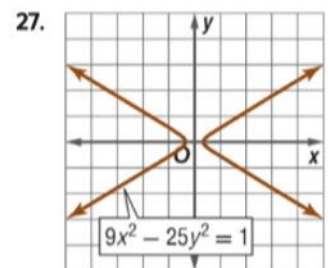
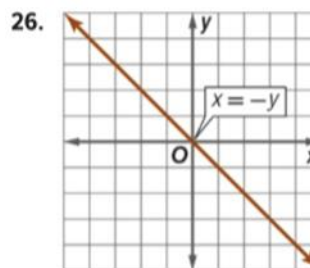
$$P(t) = \begin{cases} 0.35t + 7.6 & \text{if } 0 \leq t \leq 5 \\ 0.04t^2 - 0.6t + 11.6 & \text{if } 5 < t \leq 10 \end{cases}$$

The number of passengers trips in 1999 was:

- a. 865 million      b. 86.5 million      c. 8.65 million      d. 10.16 million

7- From the following graphs the number of the graph which is symmetric on x-axis and y-axis and the origin is:

- a. 26      b. 27  
c. 28      d. 29



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8- From the following functions the function which is not even is:

a.  $f(x) = |x^5|$

b.  $f(x) = x^8 - 2x^2 + 1$

c.  $f(x) = \frac{2}{x^4}$

d.  $f(x) = x^6 - 2x^3 + 1$

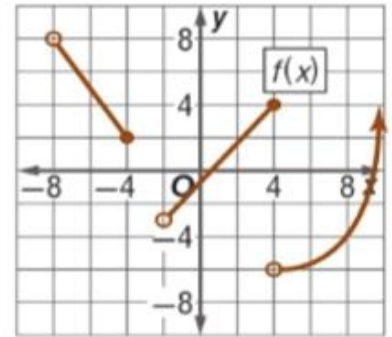
9- From the graph of  $f(x)$  the domain and the range of  $g$  are respectively:

a- Domain  $(-8, -4] \cup (-2, \infty)$  , Range  $(-6, \infty)$

b. Domain  $(-8, -4] \cup ]4, \infty[$  , Range  $(-6, \infty)$

c. Domain  $(-8, -4] \cup ]-2, 4]$  , Range  $(-6, \infty)$

d. Domain  $(-2, 4] \cup (4, \infty)$  , Range  $(-6, \infty)$



10- The zero of the function  $f(x) = 3\sqrt{x+12} - 9$  is:

a. 3

b. -3

c. 4

d. -4

11- Which of the following functions is not continuous at  $x = 2$  :

a.  $f(x) = x^3 - 2x + 3$

b.  $f(x) = \sqrt{x-2}$ .

c.  $f(x) = \frac{x-2}{2^2-2x}$

d.  $f(x) = \frac{x-2}{x+2}$



## Review Unit 1

12- Which of the following functions is not continuous at  $x = -1$  :

a.  $c$  and  $d$

b.  $f(x) = \sqrt{x^2 + 1}$ .

c.  $f(x) = \frac{1}{x+1}$

d.  $f(x) = \begin{cases} x - 2 & , x \leq -1 \\ 5 & , x > -1 \end{cases}$

13- Which of the following are the consecutive integers contains the real zeroes of the function  $f(x) = x^3 - 2x^2 + x - 1$  on  $[-2, 2]$

a.  $-2$  and  $-1$

b.  $1$  and  $2$

c.  $0$  and  $1$

d.  $-1$  and  $0$

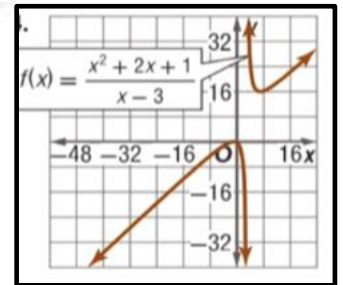
14- From the graph of function  $f$  below, which of the following choices describe its behavior:

a.  $\lim_{x \rightarrow -\infty} f(x) = -\infty$ ,  $\lim_{x \rightarrow \infty} f(x) = \infty$ ,  $\lim_{x \rightarrow 3^+} f(x) = \infty$ ,  $\lim_{x \rightarrow 3^-} f(x) = -\infty$

b.  $\lim_{x \rightarrow -\infty} f(x) = -\infty$ ,  $\lim_{x \rightarrow \infty} f(x) = \infty$ ,  $\lim_{x \rightarrow 3^+} f(x) = \infty$ ,  $\lim_{x \rightarrow 3^-} f(x) = \infty$

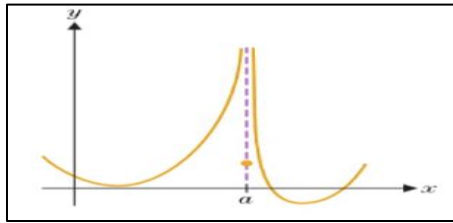
c.  $\lim_{x \rightarrow -\infty} f(x) = -\infty$ ,  $\lim_{x \rightarrow \infty} f(x) = \infty$ ,  $\lim_{x \rightarrow 3^+} f(x) = -\infty$ ,  $\lim_{x \rightarrow 3^-} f(x) = \infty$

d.  $\lim_{x \rightarrow -\infty} f(x) = -\infty$ ,  $\lim_{x \rightarrow \infty} f(x) = -\infty$ ,  $\lim_{x \rightarrow 3^+} f(x) = \infty$ ,  $\lim_{x \rightarrow 3^-} f(x) = \infty$

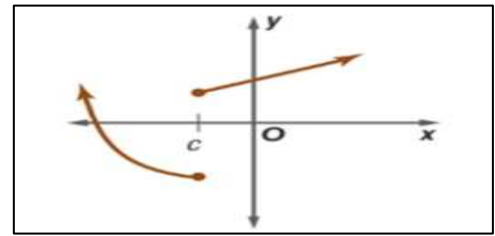


15- Which of the following has infinite discontinuity in its domain?

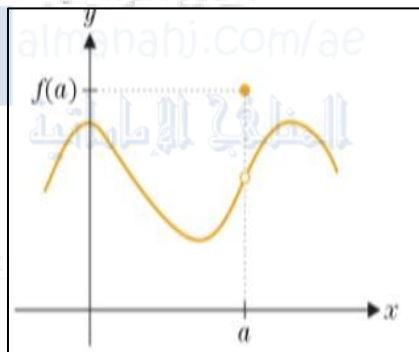
a-



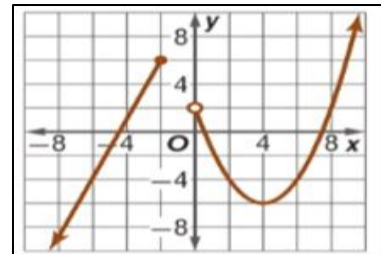
b-



c-



d-



16- If  $\lim_{x \rightarrow \infty} f(x) = \infty$  and  $f$  is an even function find  $\lim_{x \rightarrow -\infty} f(x)$

a.  $\lim_{x \rightarrow -\infty} f(x) = -\infty$

b.  $\lim_{x \rightarrow -\infty} f(x) = \infty$

c.  $\lim_{x \rightarrow -\infty} f(x) = 0$

d.  $\lim_{x \rightarrow -\infty} f(x) = -1$

17- If  $\lim_{x \rightarrow \infty} f(x) = \infty$  and  $f$  is an odd function, find  $\lim_{x \rightarrow -\infty} f(x)$  :

a.  $\lim_{x \rightarrow -\infty} f(x) = \infty$

b.  $\lim_{x \rightarrow -\infty} f(x) = 0$

c.  $\lim_{x \rightarrow -\infty} f(x) = -\infty$

d.  $\lim_{x \rightarrow -\infty} f(x) = -1$



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## Review Unit 1

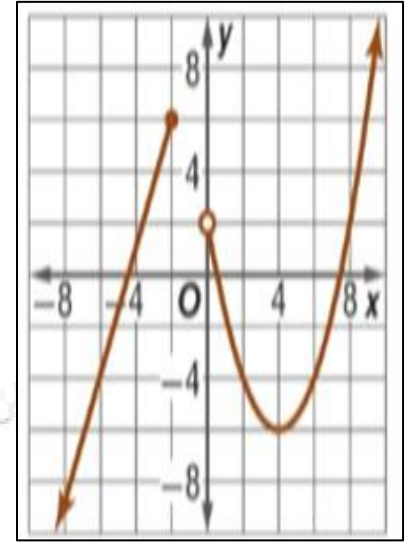
18- From the graph f below, the intervals where f is increasing, decreasing or constant are:

a. *increasing*  $(0, 4]$     *decreasing*  $(-\infty, -2], [4, \infty)$

b. *increasing*  $(-\infty, -2], [4, \infty)$     *decreasing*  $(0, 4]$

c. *increasing*  $(0, 4], [4, \infty)$     *decreasing*  $(-\infty, -2]$

d. *increasing*  $(-\infty, -2]$     *decreasing*  $(0, 4], [4, \infty)$



19- From the graph f below, the relative and absolute maximum and minimum are:

a. Relative maximum is 0 at  $x = 0$

*Relative minimum is  $-1000$  at  $x = 3.75$*

*Relative and absolute minimum is  $-1300$  at  $x = 3.75$*

b. Relative maximum is 0 at  $x = 0$

*Relative minimum is  $-1000$  at  $x = 3.75$*

*Relative minimum is  $-1300$  at  $x = 3.75$*

c. Relative maximum is 0 at  $x = 0$

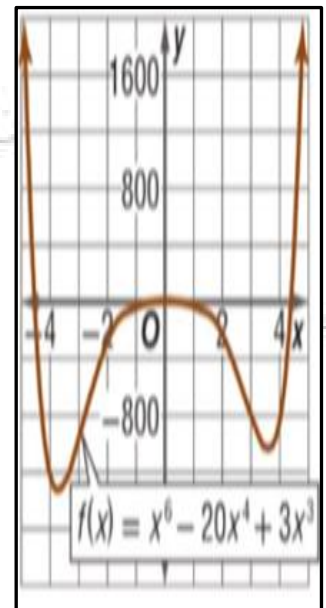
*Relative minimum is  $-1000$  at  $x = 3.75$*

*Relative and absolute minimum is  $-1300$  at  $x = -3.75$*

d. Relative maximum is 0 at  $x = 3.75$

*Relative minimum is  $-1000$  at  $x = 0$*

*Relative and absolute minimum is  $-1300$  at  $x = 3.75$*



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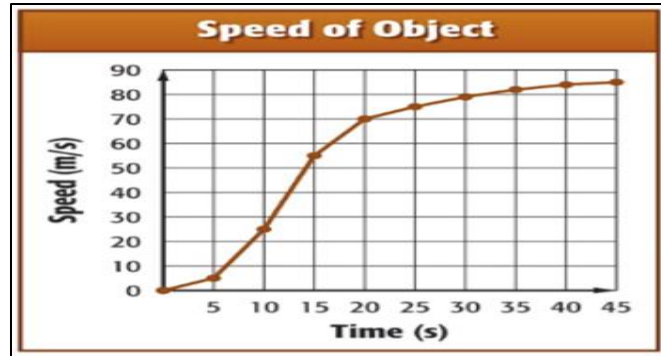
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20-The average rate of change of the function  $f(x) = x + \sqrt{x - 2}$  on  $[2, 6] =$

- a. -1                      b. 1.5                      c. 2                      d. 0

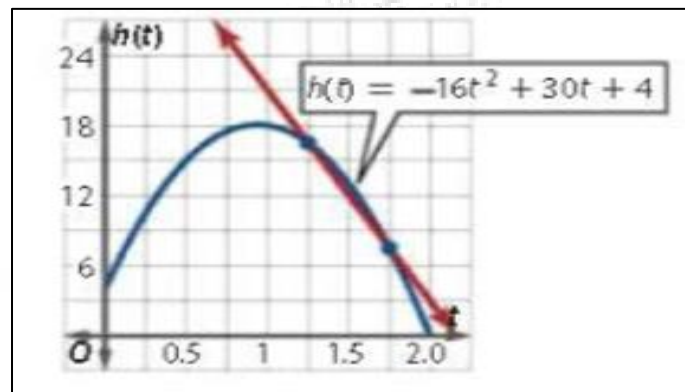
21- The average rate of change of the function  $f(x)$  in the graph below on  $[10, 20] =$

- a. 4.5  
b. 3  
c. 4  
d. 6



22- **PHYSICS** The height of an object that is thrown straight up from a height of 4 feet above ground is given by  $h(t) = -16t^2 + 30t + 4$ , where  $t$  is the time in seconds after the object is thrown. Find and interpret the average speed of the object from 1.25 to 1.75 seconds.

- a. -18  
b. 18  
c. 6  
d. -6

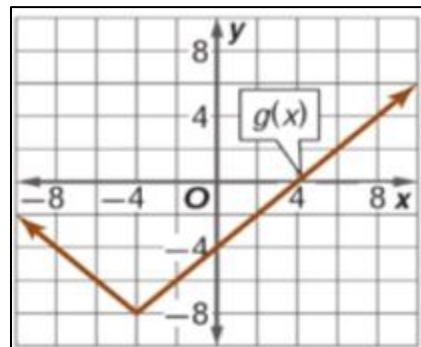




## Review Unit 1

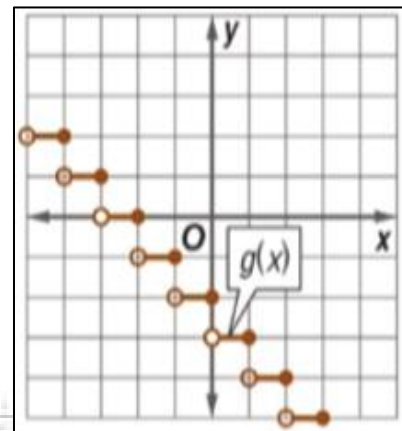
23- Explain how to transform the graph of  $f(x) = |x|$  into the graph of the function  $g(x)$  which graphed below:

- The graph of  $f$  Shifted 8 units up and 4 units left.
- The graph of  $f$  Shifted 4 units down and 4 units left.
- The graph of  $f$  Shifted 8 units down and 4 units left.
- The graph of  $f$  Shifted 8 units down and 4 units right.

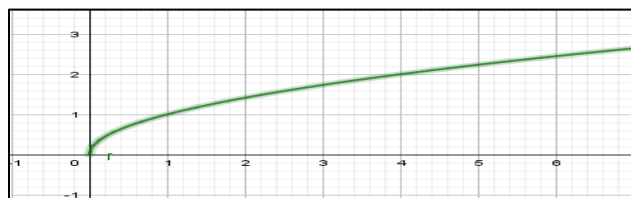


24- Explain how to transform the graph of  $f(x) = [x]$  into the graph of the function  $g(x)$  which graphed below:

- The graph of  $f$  Shifted 2 units down, and reflected on y-axis.
- The graph of  $f$  Shifted 2 units up, and reflected on y-axis.
- The graph of  $f$  Shifted 1 unit down, and reflected on y-axis.
- The graph of  $f$  Shifted 1 unit up, and reflected on y-axis.

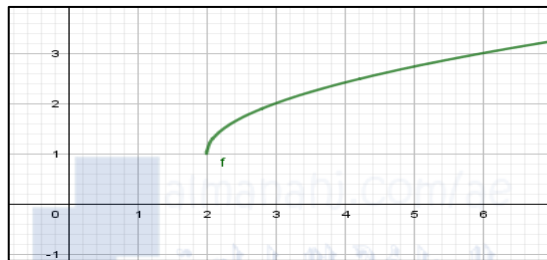


25-Using the graph of  $f(x) = \sqrt{x}$ , which of the following is the graph of  $g(x) = \sqrt{x-1} - 1$  :

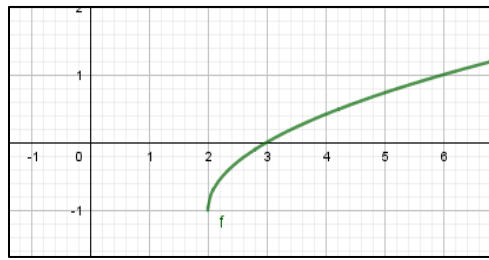


$$f(x) = \sqrt{x}$$

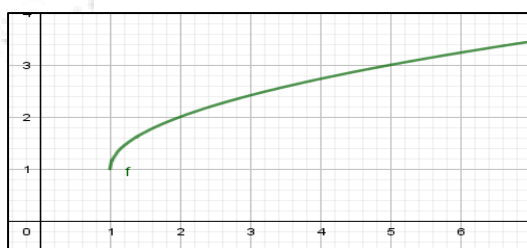
a.



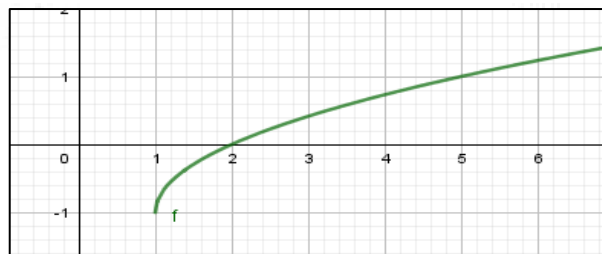
b.



c.



d.



26- Which of the following functions is the parent function of the function  $4\sqrt{x+2} + 7$ :

a.  $\sqrt{x+2}$

b.  $\sqrt{x}$ .

c.  $\sqrt{x} + 7$

d.  $4\sqrt{x}$



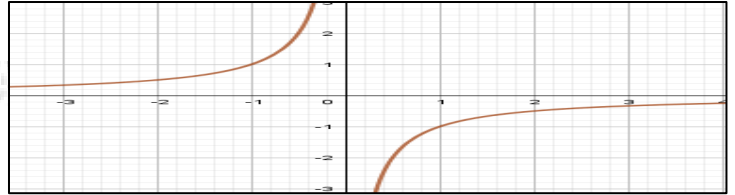
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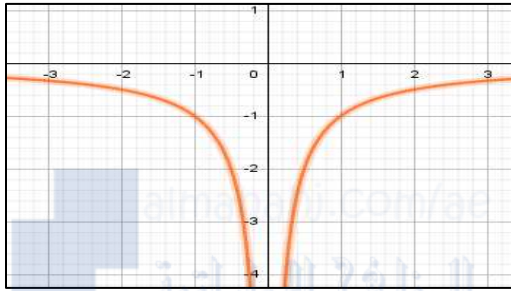
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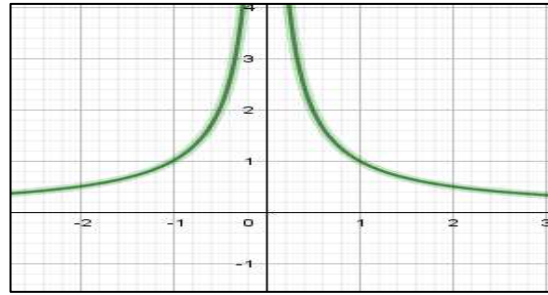
27- Using the graph of  $f(x) = \frac{-1}{x}$ , which of the following is the graph of  $g(x) = -|f(x)|$ :



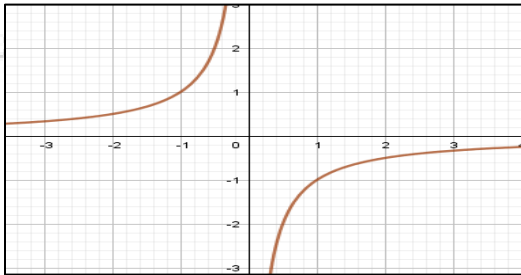
b.



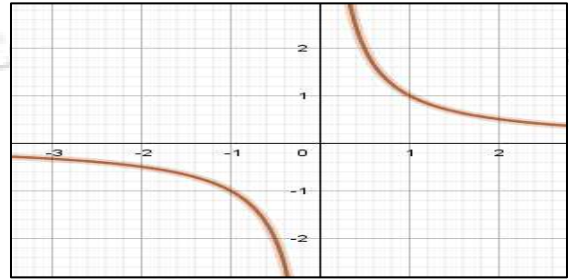
a.



c.



d.



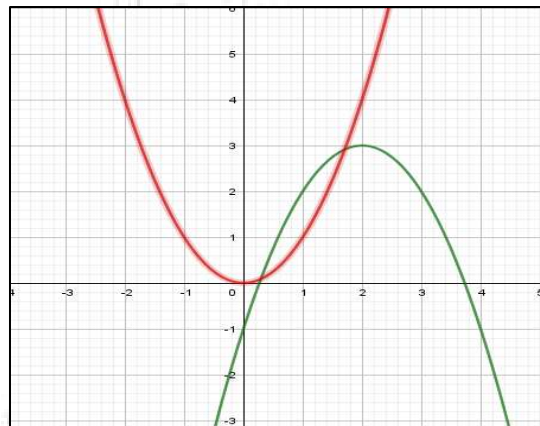
28-The equation of the function  $g(x)$  in the below graph is:

a.  $g(x) = -(x - 2)^2 + 3$

b.  $g(x) = -(x - 3)^2 + 2$

c.  $g(x) = (x - 2)^2 + 3$

d.  $g(x) = -(x - 2)^2 + 5$



$g(x)$



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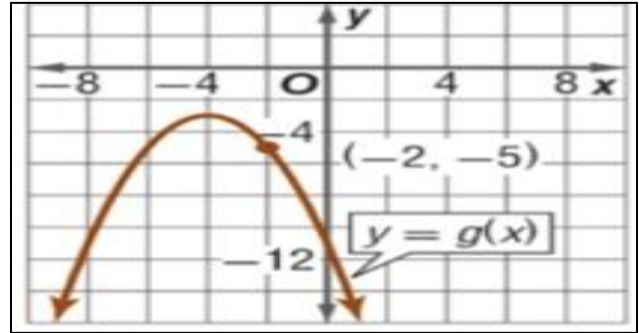
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29- The equation of the function  $g$  which is drawn below (the point  $(-2, -5)$  lies on it) is?



- a.  $g(x) = -\frac{1}{2}(x + 4)^2 + 3$   
 b.  $g(x) = -\frac{1}{2}(x - 4)^2 - 3$   
 c.  $g(x) = -\frac{1}{2}(x + 4)^2 - 3$   
 d.  $g(x) = -(x + 4)^2 - 3$

30- If  $f(x) = 5x^2 - 3x + 4$ ,  $g(x) = -2x^2 - 3x + 2$ , then  $(f + g)(x) =$

- a.  $(f + g)(x) = 3x^2 - 6x + 6$   
 b.  $(f + g)(x) = -3x^2 - 5x + 3$   
 c.  $(f + g)(x) = -x^2 - x + 3$   
 d.  $(f + g)(x) = -x^2 - 5x + 1$

31- If  $f(x) = -x^2 + 5x + 5$ ,  $g(x) = -2x^2 - 3x + 2$ , then  $(f - g)(x) =$

- a.  $(f - g)(x) = -x^2 + x + 3$   
 b.  $(f - g)(x) = -x^2 + x - 1$   
 c.  $(f - g)(x) = 3x^2 - x - 1$   
 d.  $(f - g)(x) = x^2 + 8x + 3$

32- If  $f(x) = \sqrt{x + 1}$ ,  $g(x) = (x^2 - 3x)^2 - 1$ , then  $(f \circ g)(x) =$

- a.  $(f \circ g)(x) = |x^2 - 3x|$   
 b.  $(f \circ g)(x) = x^2 - 3x$   
 c.  $(f \circ g)(x) = (x + 1 - 3\sqrt{x + 1})^2 - 1$   
 d.  $(f \circ g)(x) = (\sqrt{x + 1})^2 - 3\sqrt{x + 1} - 1$



## Review Unit 1

33 -From the choices below, which of them are the two functions  $f, g$  such that  $h(x) = (f \circ g)(x) = \sqrt{4x + 2} - 5$  :

a.  $f(x) = \sqrt{x} - 5$  ,  $g(x) = \sqrt{4x + 2}$

b.  $f(x) = \sqrt{x - 5}$  ,  $g(x) = 4x + 2$

c.  $f(x) = 4x + 2$  ,  $g(x) = \sqrt{x} - 5$

d.  $f(x) = \sqrt{x} - 5$  ,  $g(x) = 4x + 2$

34- If  $f(x) = 2x - 3$  ,  $(f / g)(3) = \frac{1}{3}$  then  $g(x) =$

a.  $g(x) = x^2 - x + 3$

b.  $g(x) = x^2 - x - 3$

c.  $g(x) = x^2 + x - 3$

d.  $g(x) = x^3 - 5x - 7$

35- Which of the following functions has inverse:

a.  $x^4 - 2x^6 - 3$

b.  $x^6$

c.  $5x^5$

d.  $|x + 3|$



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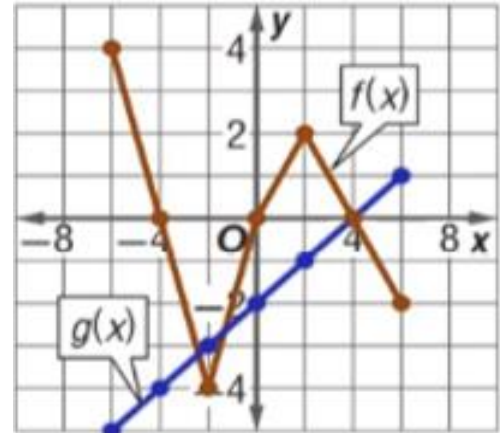
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36- Use the graph of  $f, g$  to find  $(f - g)(-4)$



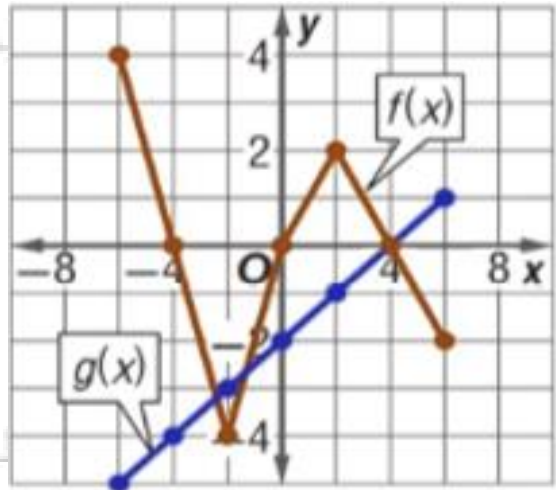
a. -3

b. 4

c. 0

d. 2

37- Use the graph of  $f, g$  to find  $(f \circ g)(0)$



a. 0

b. -4

c. 3

e. 2

38- Which of the following pairs of functions are inverses:

a.  $x^3$  ,  $x^{\frac{1}{2}}$

b.  $x^{\frac{1}{5}}$  ,  $x^5$

c.  $2x^2$  ,  $\sqrt{x}$

d.  $\frac{2}{x-1}$  ,  $x + 1$



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39- If  $f(x) = \sqrt{-3x^3 + x - 1}$  then  $f^{-1}(1) =$

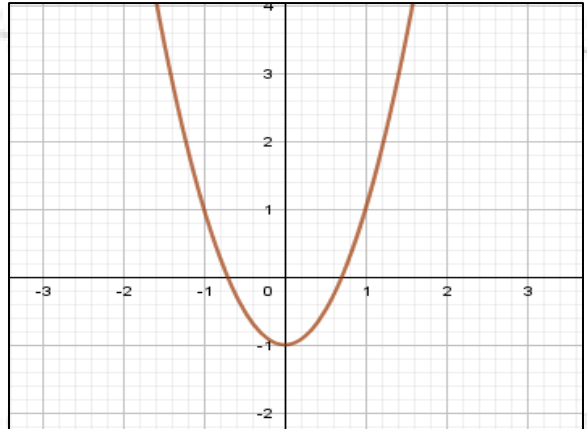
- a. -1  
b. -2  
c. 4  
d. -4

40-The inverse of the function  $f(x) = \sqrt[3]{1-x}$  is:

- a.  $f^{-1}(x) = 1 + x^3$   
b.  $f^{-1}(x) = x^{\frac{1}{3}} + 3$   
c.  $f^{-1}(x) = 1 - x^3$   
d.  $f^{-1}(x) = \sqrt[3]{1-x}$

41- The domain that making the function  $f$  (which graphed below) is one to one is :

- a.  $(-\infty, 0]$   
b.  $(-\infty, 1]$   
c.  $[-1, 10]$   
d.  $[-3, \infty)$



45-The formula we used to convert  $x$  degrees Celsius to Fahrenheit is  $f(x) = \frac{9}{5}x + 32$

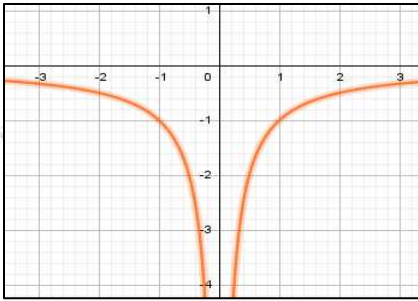
Which of the following formulas convert  $x$  Fahrenheit to Celsius?

- a.  $h(x) = \frac{9}{5}(x - 32)$   
b.  $h(x) = \frac{9}{5}(x + 32)$   
c.  $h(x) = \frac{5}{9}(x - 32)$   
d.  $h(x) = \frac{5}{9}(x + 32)$

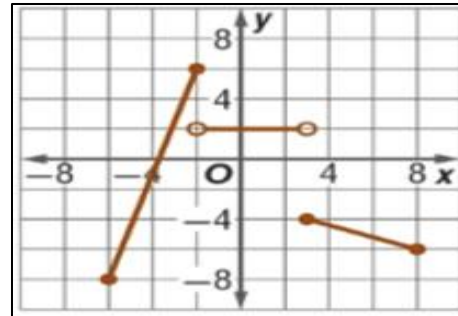


46- Determine which of the following has inverse?

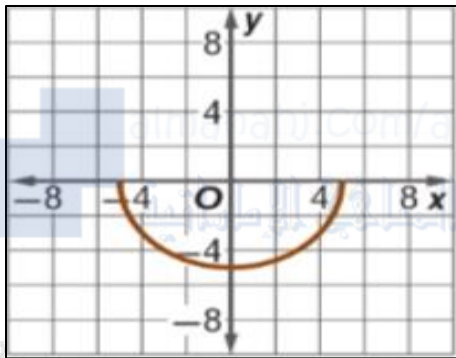
a.



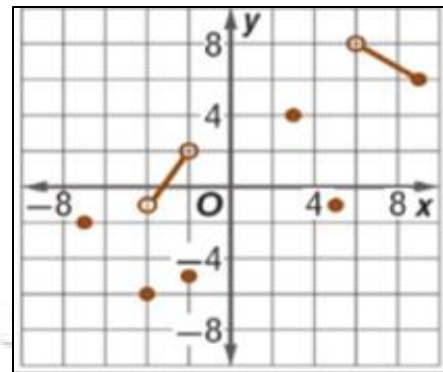
b.



c.



d.



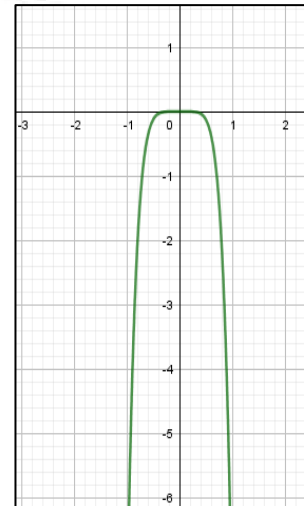
47 - The domain, range, intercepts and continuity respectively for  $y = f(x) = -8x^6$  is:

a. Domain:  $R$ , Range:  $R \setminus \{0\}$ , Intercepts  $x = 0$ ,  $y = 0$ , continuous on  $R$ .

b. Domain:  $R \setminus \{0\}$ , Range:  $R$ , Intercepts  $x = 0$ ,  $y = 0$ , continuous on  $R$ .

c. Domain:  $R$ , Range:  $R$ , Intercepts  $x = 0$ ,  $y = 0$ , continuous on  $R \setminus \{0\}$ .

d. Domain:  $R$ , Range:  $(-\infty, 0]$ , Intercepts  $x = 0$ ,  $y = 0$ , continuous on  $R$ .



للتواصل: 0507740983

للرجوع الى الملفات والروابط المهمة للمادة يرجى الاشتراك بالقناة (يوتيوب وتلغرام)

Easy Math/Tea. Bayan Arabli





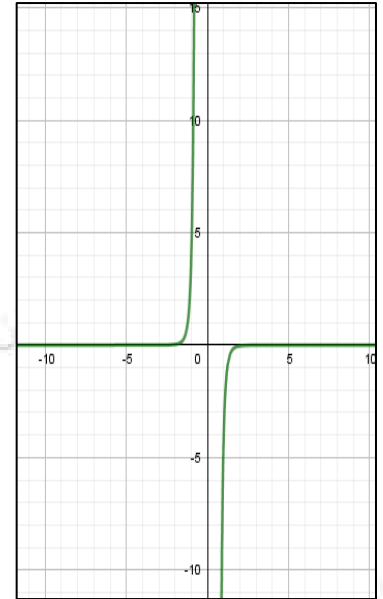
47 -The domain, range, intercepts and continuity respectively for  $y = f(x) = -4x^{-7}$  is:

a. Domain:  $R$ , Range:  $R \setminus \{0\}$ , Intercepts  $x = 0$ ,  $y = 0$ ,  
continuous on  $R \setminus \{0\}$ .

b. Domain:  $R \setminus \{0\}$ , Range:  $R \setminus \{0\}$ , Intercepts  $\emptyset$ ,  
continuous on  $R \setminus \{0\}$ .

c. Domain:  $R$ , Range:  $R$ , Intercepts  $\emptyset$ ,  
continuous on  $R \setminus \{0\}$ .

d. Domain:  $R$ , Range:  $R$ , Intercepts  $x = 0$ ,  $y = 0$ ,  
continuous on  $R$ .



48 - Describe the end behavior of  $y = f(x) = -4x^{-\frac{1}{6}}$  is:

a.  $\lim_{x \rightarrow \infty} f(x) = 0$ ,  $\lim_{x \rightarrow 0^+} f(x) = -\infty$

$\lim_{x \rightarrow -\infty} f(x) = 0$ ,  $\lim_{x \rightarrow -0^-} f(x) = \infty$

b.  $\lim_{x \rightarrow \infty} f(x) = 0$ ,  $\lim_{x \rightarrow -0^+} f(x) = 0$

$\lim_{x \rightarrow -\infty} f(x) = 0$ ,  $\lim_{x \rightarrow 0^-} f(x) = \infty$

c.  $\lim_{x \rightarrow \infty} f(x) = 0$ ,  $\lim_{x \rightarrow 0^+} f(x) = \infty$

$\lim_{x \rightarrow -\infty} f(x) = 0$ ,  $\lim_{x \rightarrow 0^-} f(x) = -\infty$

d.  $\lim_{x \rightarrow \infty} f(x) = \infty$ ,  $\lim_{x \rightarrow -0^+} f(x) = -\infty$

$\lim_{x \rightarrow -\infty} f(x) = 0$ ,  $\lim_{x \rightarrow 0^-} f(x) = \infty$

