

# اختبر نفسك (1) Check yourself (1)

## الرياضيات Mathematics

الصف الحادي عشر متقدم 11 ADVANCED

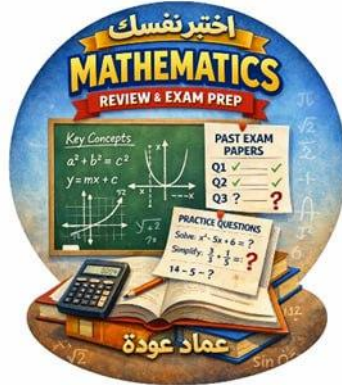
REVEAL

الفصل الأول T1

According to the previous exam

مراجعة الدرس الأول رسم الدوال الاسية  
من الوحدة الخامسة اعتمادا على  
الاختبارات السابقة

Lesson (5-1)  
Graphing Exponential Functions  
2026-2027  
الأستاذ عماد عودة

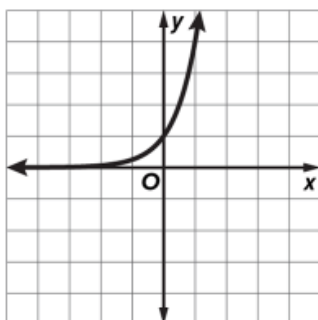


اسم الطالب: -

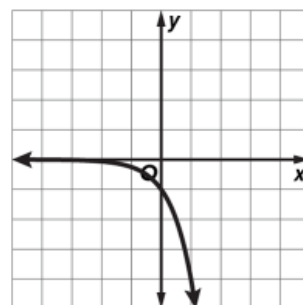
Q1 Which of the following represent the graph of

$$f(x) = 4^x$$

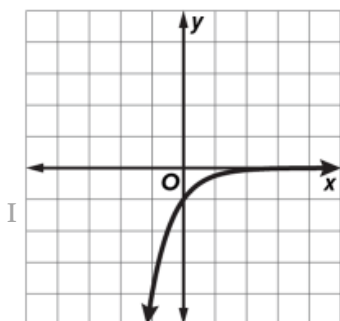
a)



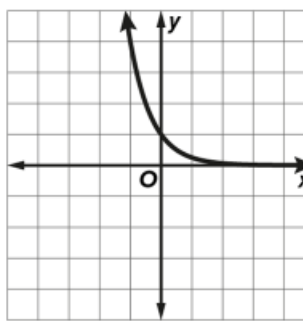
b)



c)



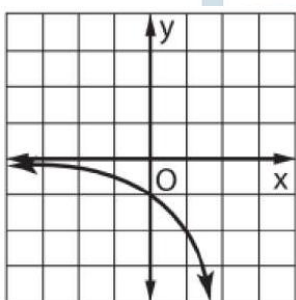
d)



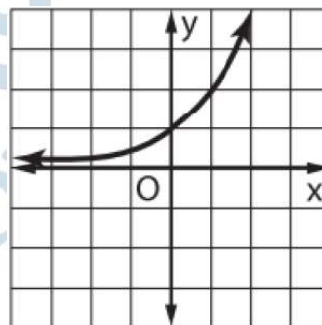
Q2 Which of the following represent the graph of

$$f(x) = 2^x$$

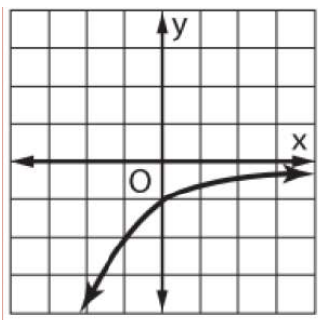
a)



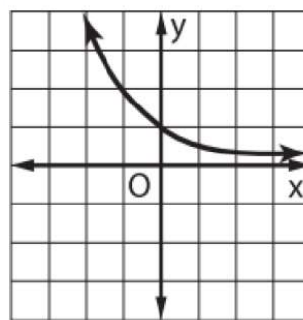
b)



c)



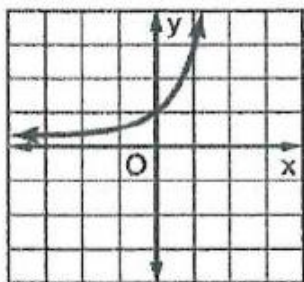
d)



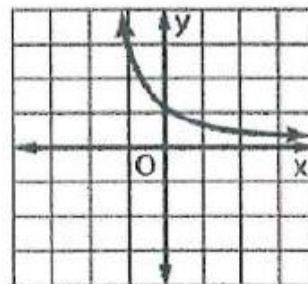
Q3 Which of the following represents the graph of

$$f(x) = \left(\frac{1}{3}\right)^x$$

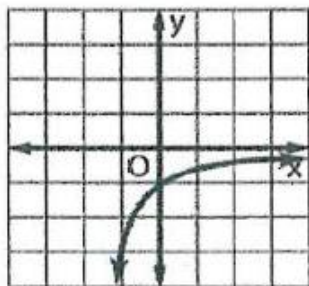
a)



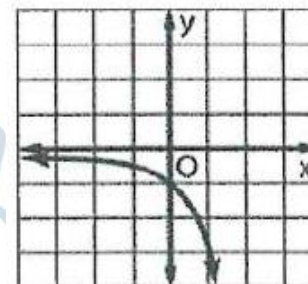
b)



c)



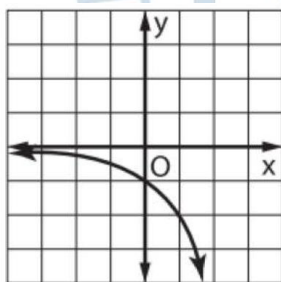
d)



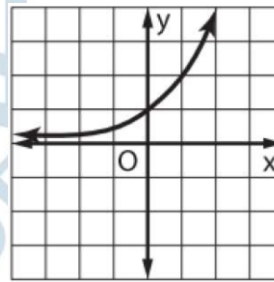
Q4 Which of the following represents the graph of

$$f(x) = -2^{-x}$$

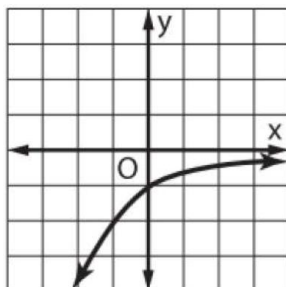
a)



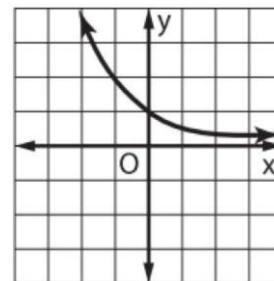
b)



c)



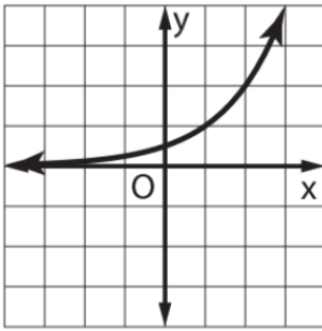
d)



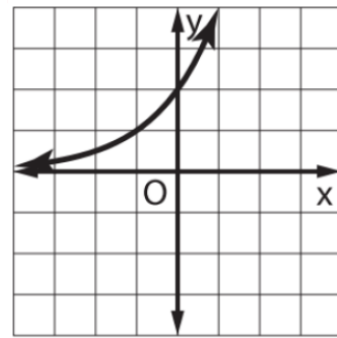
Q5 Which of the following represents the graph of

$$f(x) = 2^{x-1}$$

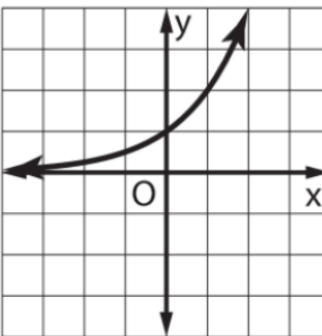
a)



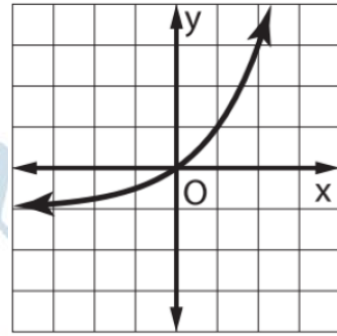
b)



c)



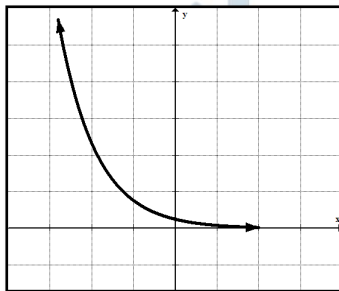
d)



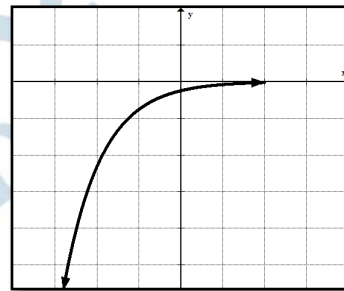
Q6 Which of the following represents the graph of

$$f(x) = -\frac{5}{4} \left(\frac{4}{5}\right)^{x+4} + 2$$

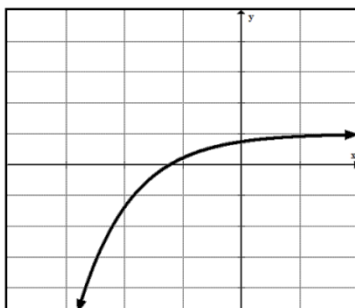
a)



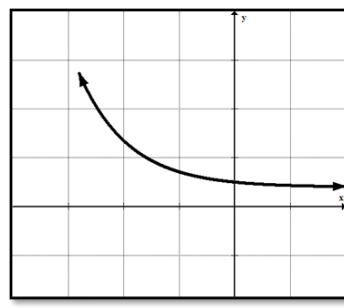
b)



c)



d)



Q7 Which is the range of the function

$$g(x) = -6^x ?$$

- a)  $(-\infty, \infty)$
- b)  $(0, \infty)$
- c)  $(-\infty, 1]$
- d)  $(-\infty, 0)$

Q8 Which is the range of the function

$$g(x) = 3^{x-2} + 5 ?$$

- a)  $(-\infty, \infty)$
- b)  $(5, \infty)$
- c)  $(-\infty, 5]$
- d)  $(-\infty, 2)$

Q9 Determine the equation of the function  $f(x)$  after being translated 4 units left and 3 units down

$$f(x) = 5^x$$

- a)  $f(x) = 5^{x-4} - 3$
- b)  $f(x) = 5^{x-3} - 4$
- c)  $f(x) = 5^{x+3} - 4$
- d)  $f(x) = 5^{x+4} - 3$

Q10 Determine the equation of the function  $f(x)$  after being translated 3 units right and 2 units down

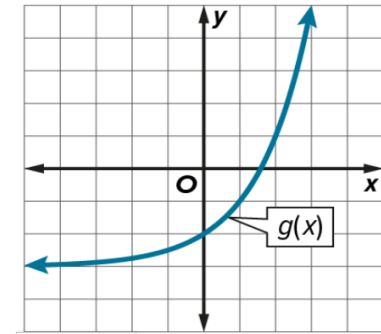
$$f(x) = 3^x$$

- a)  $f(x) = 3^{x-2} - 3$
- b)  $f(x) = 3^{x-3} - 2$
- c)  $f(x) = 3^{x+2} - 3$
- d)  $f(x) = 3^{x+3} - 2$

Q11 Identify the value of  $k$  and write a function  $g(x)$  for the graph as it relates to  $f(x)$

$$f(x) = 2^x, \quad g(x) = f(x) + k$$

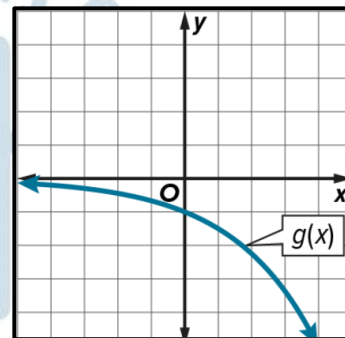
- a)  $k = 3$  and  $g(x) = 2^x + 3$
- b)  $k = 2$  and  $g(x) = 2^x + 2$
- c)  $k = -3$  and  $g(x) = 2^x - 3$
- d)  $k = -2$  and  $g(x) = 2^x - 2$



Q12 Identify the value of  $k$  and write a function  $g(x)$  for the graph as it relates to  $f(x)$

$$f(x) = \left(\frac{3}{2}\right)^x, \quad g(x) = kf(x)$$

- a)  $k = -1$  and  $g(x) = \left(\frac{3}{2}\right)^x - 1$
- b)  $k = -2$  and  $g(x) = -2\left(\frac{3}{2}\right)^x$
- c)  $k = -\frac{1}{2}$  and  $g(x) = -\frac{1}{2}\left(\frac{3}{2}\right)^x$
- d)  $k = -1$  and  $g(x) = -\left(\frac{3}{2}\right)^x$



Q13 Identify the function that represent exponential decay

- a)  $g(x) = \left(\frac{2}{3}\right)^x$
- b)  $g(x) = \left(\frac{3}{2}\right)^x$
- c)  $g(x) = 3^x$
- d)  $g(x) = 2^x$

Q14 Identify the function that represent exponential decay

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

Q15 Identify the function that represent exponential Growth

- a)  $g(x) = 3(0.7)^x$
- b)  $g(x) = \frac{1}{2}\left(\frac{1}{2}\right)^x$
- c)  $g(x) = 2\left(\frac{1}{3}\right)^x$
- d)  $g(x) = 4\left(\frac{3}{2}\right)^x$

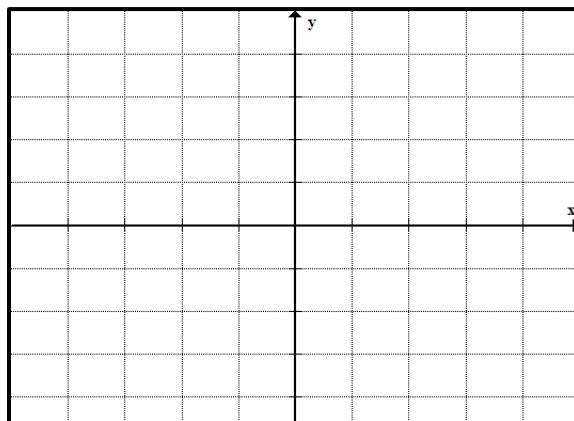
Q16 Write an exponential function that passes through the given points

$(-1, -4), (0, -2)$

- a)  $y = \frac{1}{2}(-2)^x$
- b)  $y = -2\left(\frac{1}{2}\right)^x$
- c)  $y = -2(2)^x$
- d)  $y = -2\left(\frac{1}{4}\right)^x$

Q16 Graph each function. Find the domain, range, y-intercept, asymptote, and end behavior.

$$y = -\frac{3}{2}(1.5)^x$$



Q17 Write an exponential function with a graph that passes through the given points.

$$\left(0, \frac{1}{3}\right), (3, 9)$$

اطيب التمنيات  
الأستاذ عماد عودة