PRINTABLE VERSION

Quiz 20

Question 1

Which of the following points is on the graph of f ?

$$f(x) = \left(\frac{4}{3}\right)^x$$

a) $\left(-4, \frac{1}{4}\right)$

b) $\left(-4, \frac{81}{256}\right)$

c) $\left(-4, \frac{256}{81}\right)$

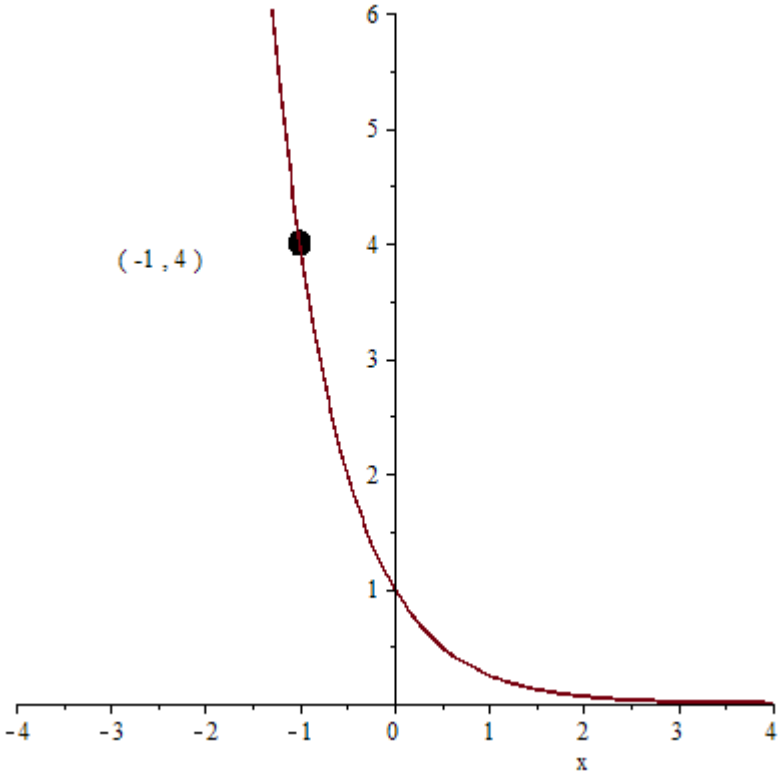
d) $\left(4, \frac{81}{256}\right)$

e) $\left(4, \frac{3}{4}\right)$

f) None of the above

Question 2

Which of the following functions corresponds with the graph below?



a) $f(x) = 4^{-x+1}$

b) $x = -4^{-x}$

c) $f(x) = 4^{-x}$

d) $f(x) = 4^{x}$

e) $f(x) = x^{4}$

f) None of the above

Question 3

Find the domain and range of the function

$$f(x) = 2\left(5^{x-4}\right) - 3$$

a) domain = (-3, ∞), range = (-∞, ∞)

b) domain = (-∞, 0), range = (-∞, -3]

c) domain = (-∞, ∞), range = (-3, ∞)

d) domain = (-∞, -3), range = (-∞, ∞)

e) domain = (-∞, 0), range = (-3, ∞)

f) None of the above

Question 4

Find the y-intercept of

$$f(x) = 7^{x+1} + 6$$

a) 1

b) 8

c) 6

d) 13

e) 7

f) None of the above

Question 5

Find the asymptote of the function

$$f(x) = -\left(3^{x-6}\right) - 1$$

a) $y = 0$

b) $x = -1$

c) $y = -1$

d) $y = 1$

e) $x = 0$

f) None of the above

Question 6

Find the exponential function which passes through the points (0, 1) and (1, 11).

a) $f(x) = 11^x$

b) $f(x) = 11^x - 1$

c) $f(x) = 11\,x$

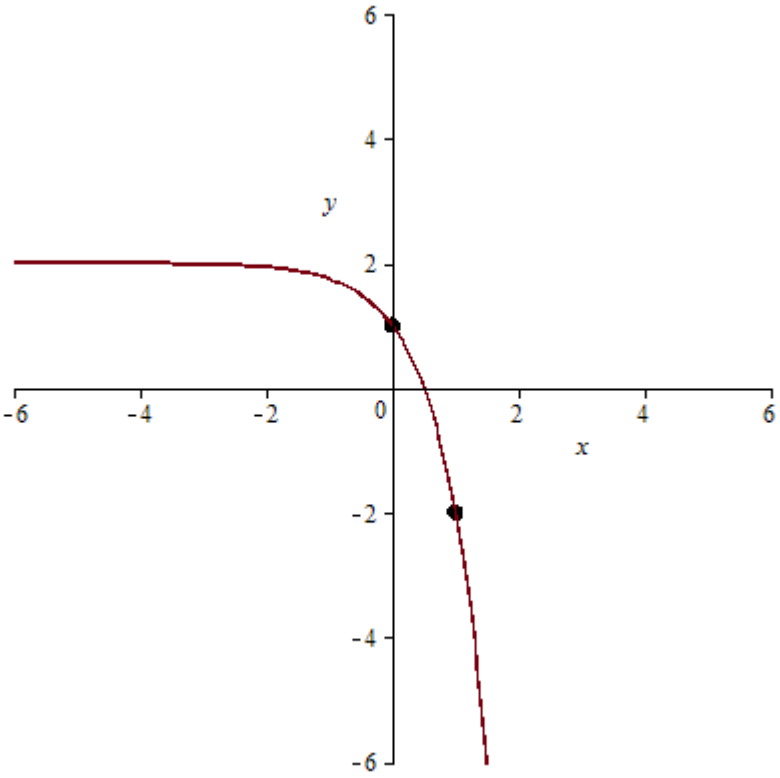
d) $f(x) = 11^{-x}$

e) $f(x) = 11^x + 1$

f) None of the above

Question 7

Find the exponential function with the given graph.



a) $f(x) = 4^{x-2}$

b) $f(x) = 4^{x+2}$

c) $f(x) = 4^x - 2$

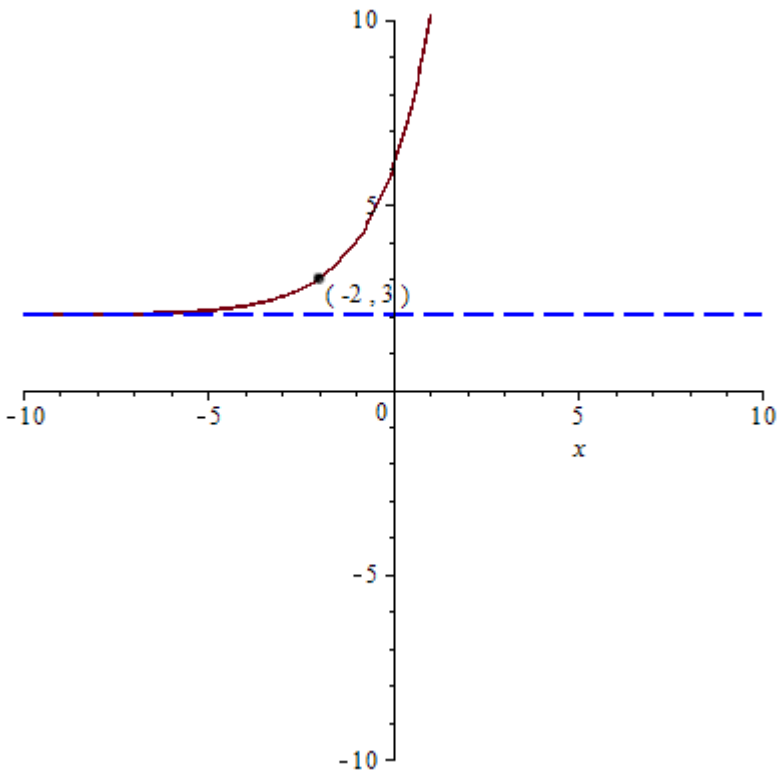
d) $f(x) = -4^x + 2$

e) $f(x) = 4^x + 2$

f) None of the above

Question 8

Which of the following functions corresponds to the graph?



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

b) $f(x) = 2^{x+2} + 2$

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

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

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

f) None of the above

Question 9

Find the domain and range of the function

$$f(x) = e^{x-9} + 4$$

a) domain = (4, ∞), range = (-∞, ∞)

b) domain = (-∞, 0), range = (4, ∞)

c) domain = $(-\infty, 0)$, range = $(-\infty, 4]$

d) domain = $(-\infty, \infty)$, range = $(4, \infty)$

e) domain = $(-\infty, 4)$, range = $(-\infty, \infty)$

f) None of the above

Question 10

Which of the following describes the transformations that are applied to sketch the graph of

$$f(x) = -e^{x+10} + 6$$

a) Reflect with respect to *x*-axis, shift 10 units left, and 6 units down.

b) Shift 10 units left, and 6 units up.

c) Reflect with respect to *x*-axis, shift 10 units left, and 6 units up.

d) Shift 10 units right, and 6 units down.

e) Shift 10 units left, and 6 units down.

f) None of the above