

Name: \_\_\_\_\_

## Evaluating Exponential Functions

ES1

A) Evaluate each function at the specified value.

1)  $f(x) = 4 \cdot 5^{(8+x)}$  ;  $x = -6$

\_\_\_\_\_

2)  $f(x) = 9^{(x-7)} - x$  ;  $x = 8$

\_\_\_\_\_

B) Evaluate each function.

1)  $f(x) = (-8)^{(-3+x)}$  ; find  $f(4)$

\_\_\_\_\_

2)  $f(x) = 10 \cdot 4^{-x} - 11$  ; find  $f(-2)$

\_\_\_\_\_

C) If  $f(x) = 8 \cdot (-2)^{(-2-x)} - 2x$  ; find the following.

1)  $f(-5) =$  \_\_\_\_\_

2)  $f(0) =$  \_\_\_\_\_

3)  $f(-3) =$  \_\_\_\_\_

4)  $f(-7) =$  \_\_\_\_\_

D) If  $f(x) = 3^{(x+3)} + 1$  ; find the following.

1)  $f(2) - 9f(0) =$  \_\_\_\_\_

2)  $\frac{4f(-1)}{f(-5)} =$  \_\_\_\_\_

3)  $3f(-4) \times f(-2) =$  \_\_\_\_\_

4)  $f(1) + 2f(-3) =$  \_\_\_\_\_

E) What is the value of  $f(-5)$ , if  $f(x) = -13 + 7^{(2x+10)}$  ?

i) 12

ii) 6

iii) -12

iv) -6

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2)  $f(x) = 10 \cdot 4^{-x} - 11$  ; find  $f(-2)$

149C) If  $f(x) = 8 \cdot (-2)^{(-2-x)} - 2x$  ; find the following.

1)  $f(-5) =$  -54

2)  $f(0) =$  2

3)  $f(-3) =$  -10

4)  $f(-7) =$  -242

D) If  $f(x) = 3^{(x+3)} + 1$  ; find the following.

1)  $f(2) - 9f(0) =$  -8

2)  $\frac{4f(-1)}{f(-5)} =$  36

3)  $3f(-4) \times f(-2) =$  16

4)  $f(1) + 2f(-3) =$  86

E) What is the value of  $f(-5)$ , if  $f(x) = -13 + 7^{(2x+10)}$ ?

i) 12

ii) 6

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