Name: _____

# Evaluating Exponential Functions

**A) Evaluate each function at the specified value.**

1) $f(x) = 3^{(-x + 6)} - 4$ ; $x = 6$

2) $f(x) = 8^{(-2x - 15)} + 11$ ; $x = -9$

_____                    _____

**B) Evaluate each function.**

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

$+ x$ ; find $f(0)$

_____

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**C) If $f(x) = 4^{(x + 3)}$ ; find t**

1) $f(-3)$ = _____                    _____

3) $f(1)$ = _____                    _____

**D) If $f(x) = 7 - 2^x$ ; find th**

1) $f(0) \times 2f(-1)$ = _____                    = _____

3) $8f(-3) + f(5)$ = _____

4) $\dfrac{5f(6)}{f(1)}$ = _____

**E) What is the value of $f(9)$, if $f(x) = (-10)^{(x - 8)} \cdot (x + 6)$?**

i)    220                ii)    −150                iii)    −220                iv)    150

**Answer key**

ES3

## Evaluating Exponential Functions

A) Evaluate each function at the specified value.

1) $f(x) = 3^{(-x + 6)} - 4$ ; $x = 6$

2) $f(x) = 8^{(-2x - 15)} + 11$ ; $x = -9$

_____**−3**_____

_____**523**_____

B) Evaluate each function.

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

$+ x$ ; find $f(0)$

**PREVIEW**

_____**−180**_____

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**1**_____

C) If $f(x) = 4^{(x + 3)}$ ; find t

1) $f(-3)$ =

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**4**_____

3) $f(1)$ =

**64**_____

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D) If $f(x) = 7 - 2^x$ ; find th

1) $f(0) \times 2f(-1)$ =

= _____**−94**_____

3) $8f(-3) + f(5)$ = _____**30**_____

4) $\dfrac{5f(6)}{f(1)}$ = _____**−57**_____

E) What is the value of $f(9)$, if $f(x) = (-10)^{(x - 8)} \cdot (x + 6)$?

i) 220

ii) ✓ −150

iii) −220

iv) 150