

Evaluating Exponential Functions

A) Evaluate each function at the specified value. Round your answer to the nearest tenth.

1) $f(x) = 16 \cdot \left(\frac{2}{3}\right)^{4x}$; $x = -\frac{1}{2}$

2) $f(x) = -(\sqrt{8})^{-0.5x} - 1.5x$; $x = -4$

B) Evaluate each function. Round your answer to the nearest tenth.

1) $f(x) = (2.6x) \cdot (4.9)^x$

$2x - \frac{3}{4}x$; $x = \frac{1}{5}$

C) If $f(x) = 15 \cdot \left(\frac{4}{5}\right)^{-2x}$; find

1) $f\left(\frac{1}{2}\right) =$ _____

3) $f(0) =$ _____

D) If $f(x) = (3)^{-(x+2)} + 2.8x$

1) $2f(0) + 3.2f(-1) =$ _____

3) $\frac{6.3f(-5)}{f(0)} =$ _____

4) $9f(-4) \times 1.1f(2) =$ _____

E) What is the value of $f(-1)$, if $f(x) = 7 \cdot \left(\frac{2}{3}\right)^x$?

i) $\frac{14}{3}$

ii) $-\frac{21}{2}$

iii) $-\frac{14}{3}$

iv) $\frac{21}{2}$

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36

2) $f(x) = -(\sqrt{8})^{-0.5x} - 1.5x$; $x = -4$

-2

B) Evaluate each function. Round your answer to the nearest tenth.

1) $f(x) = (2.6x) \cdot (4.9)^x$

935.7

2) $f(x) = \frac{3}{4}x$; $x = \frac{1}{5}$

$\frac{4}{5}$

C) If $f(x) = 15 \cdot \left(\frac{4}{5}\right)^{-2x}$; find

1) $f\left(\frac{1}{2}\right) =$ $\frac{75}{4}$

3) $f(0) =$ 12

$\frac{48}{5}$ or $9\frac{3}{5}$

D) If $f(x) = (3)^{-(x+2)} + 2.8x$

1) $2f(0) + 3.2f(-1) =$ 3.5

3) $\frac{6.3f(-5)}{f(0)} =$ 737.1

4) $9f(-4) \times 1.1f(2) =$ -122.2

E) What is the value of $f(-1)$, if $f(x) = 7 \cdot \left(\frac{2}{3}\right)^x$?

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