1. (1 pt) Find the domain of the following functions. Write the answer in interval notation.
Note: If the answer includes more than one interval write the intervals separated by the "union" symbol, U. If needed enter ∞ as *infinity* and $-\infty$ as *-infinity* .

(A) $\dfrac{1}{1-e^x}$
Domain: _____

(B) $\sqrt{1-9^t}$
Domain: _____

Answer(s) submitted:
- `(-Inf,0)U(0,Inf)`
- `(-Inf,0]`

(correct)
Correct Answers:
- `(-infinity,0) U (0,infinity)`
- `(-infinity,0]`

2. (1 pt) Find the limit. If needed, enter *infinity* for ∞ , *-infinity* for $-\infty$ or *dne* if the limit does not esist.

$$\lim_{x\to\infty}(1.043)^x$$

Answer(s) submitted:
- `infinity`

(correct)
Correct Answers:
- `infinity`

3. (1 pt)

Evaluate the following limits. If needed, enter *infinity* for ∞ , *-infinity* for $-\infty$ or *dne* if the limit does not esist.

(A) $\lim_{x\to\infty}\dfrac{9}{e^x+6} =$ _____

(B) $\lim_{x\to-\infty}\dfrac{9}{e^x+6} =$ _____

Answer(s) submitted:
- `0`
- `3/2`

(correct)
Correct Answers:
- `0`
- `1.5`

4. (1 pt) Find the limit. If needed, enter *infinity* for ∞ , *-infinity* for $-\infty$ or *dne* if the limit does not esist.

$$\lim_{x\to\infty} e^{-4x^5}$$

Answer(s) submitted:
- `0`

(correct)
Correct Answers:
- `0`

5. (1 pt) Find the limit. If needed, enter *infinity* for ∞ , *-infinity* for $-\infty$ or *dne* if the limit does not esist.

$$\lim_{x\to\infty}\frac{4+5(5^x)}{2-4(5^x)}$$

Answer(s) submitted:
- `-5/4`

(correct)
Correct Answers:
- `-1.25`

6. (1 pt) Find the limit. If needed, enter *infinity* for ∞ , *-infinity* for $-\infty$ or *dne* if the limit does not esist.

$$\lim_{x\to\infty} e^{-3x}\cos(9x)$$

Answer(s) submitted:
- `0`

(correct)
Correct Answers:
- `0`