

Name: _____

NetID: _____

Lecture: B

Discussion: Friday 11 12 1 2 3 4

1. (5 points) Simplify, showing your work.

$$\log_3(45x) - \log_3(5x) =$$

2. (10 points) Check the (single) box that best characterizes each item.

The interval (a, b) contains b .

true

☐

false

☐

For any real number x ,
if $x \geq 10$, then $x > 10$.

true

☐

false

☐

$$3^{\lfloor -1.5 \rfloor} =$$

$$-3 \quad \boxed{}$$

$$\frac{1}{9} \quad \boxed{}$$

$$\frac{1}{3\sqrt{3}} \quad \boxed{}$$

$$\frac{1}{3} \quad \boxed{}$$

$$\log_3 2 \leq \log_2 3$$

true

☐

false

☐

$$\neg(p \wedge \neg q) \equiv \neg p \wedge q$$

true

☐

false

☐

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1. (5 points) Suppose $\log_k x = 8$. Then $\log_k(x\sqrt{x}) =$

2. (10 points) Check the (single) box that best characterizes each item.

The interval (a, b) contains b .

true

☐

false

☐

If 7 is even,
then 7 is a perfect square.

true

☐

false

☐

undefined

☐

$\exists n \in \mathbb{R}$, such that $n^2 = 10$.

true

☐

false

☐

undefined

☐

$\log_7 5 < 1$

true

☐

false

☐

For any real number x , $2\lceil x \rceil \leq \lceil 2x \rceil$

true

☐

false

☐