CS 173, Summer 19 Examlet 1

Name:_____

NetID:_____ **Lecture: A B**

Discussion: Monday & Wednesday 1:30 2:30

1. (5 points) State the negation of the following claim, moving all negations (e.g. "not") so that they are on individual predicates.

For every tiger k, if k is orange, then k is large and k is not friendly.

2. (5 points) State the contrapositive of the following claim, moving all negations (e.g. "not") so that they are on individual predicates.

For every tiger k, if k is orange, then k is large and k is not friendly.

3. (5 points) Find all integer solutions to the equation $2p^2 + 5p = 3$. Show your work.

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1. (5 points) Simplify, showing your work.
   $25 \times 2^{-3\log_2(5)} =$

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

   Shorthand for the set of integers. $\mathbb{J}$ ☐ $\mathbb{N}$ ☐ $\mathbb{W}$ ☐ $\mathbb{Z}$ ☐

   If U. Illinois is in Paris, then $\pi < 0$. true ☐ false ☐ undefined ☐

   $\lfloor -3.4 \rfloor$ -3 ☐ -4 ☐ 3.4 ☐ undefined ☐

   $\neg(p \wedge \neg q) \equiv \neg p \vee q$ true ☐ false ☐

   $p \to q \equiv \neg p \to \neg q$ true ☐ false ☐