## Problem Wk.8.3.3: Op Amp practice

## Part 1: Op Amps

1. Consider the following circuit:


Note that both resistors have the same value.
If $\mathrm{V}_{\mathrm{i}}=4$, then $\mathrm{V}_{\mathrm{o}}=$ $\qquad$
If $\mathrm{V}_{\mathrm{i}}=8$ then $\mathrm{V}_{\mathrm{o}}=$ $\qquad$
If $V_{i}=10$ then $V_{o}=$ $\qquad$

## Part 2: Op Amps

1. Assume the op-amps in the following circuit are "ideal."


Determine the current $I_{x}$ when $V_{1}=1$ Volts and $V_{2}=2$ Volts.
Amps (as decimal number)
Determine the voltage $V_{A}$ when $V_{1}=1$ Volts and $V_{2}=2$ Volts.
$\qquad$ Volts (as decimal number)
Determine a general expression for $V_{A}$ in terms of $V_{1}$ and $V_{2}$. Enter the coefficients as decimal numbers:

$$
V_{A}=\square * V_{1}+\square * V_{2}
$$

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