

## Quiz 10.4 – Bond Enthalpies

Name: \_\_\_\_\_

**Problem 1 (4 points)**Give the approximate  $\Delta H_{rxn}$  for this reaction:  $\text{N}_2(\text{g}) + \text{O}_2(\text{g}) \longrightarrow 2 \text{NO}(\text{g})$ 

You may need to use the following values

Average Bond Enthalpies					
Compound	$\Delta H_{Bond} \left( \frac{\text{kJ}}{\text{mol}} \right)$	Compound	$\Delta H_{Bond} \left( \frac{\text{kJ}}{\text{mol}} \right)$	Compound	$\Delta H_{Bond} \left( \frac{\text{kJ}}{\text{mol}} \right)$
O=O	498	O–O	142		
N–N	240	N=N	418	N≡N	941
N–O	200	N=O	607		

**Problem 2 (1 point)**Briefly explain why this value is only an *approximation* of the true value

## *Wild Geese*

By Mary Oliver

You do not have to be good.  
You do not have to walk on your knees  
for a hundred miles through the desert repenting.  
You only have to let the soft animal of your body  
love what it loves.  
Tell me about despair, yours, and I will tell you mine.  
Meanwhile the world goes on.  
Meanwhile the sun and the clear pebbles of the rain  
are moving across the landscapes,  
over the prairies and the deep trees,  
the mountains and the rivers.  
Meanwhile the wild geese, high in the clean blue air,  
are heading home again.  
Whoever you are, no matter how lonely,  
the world offers itself to your imagination,  
calls to you like the wild geese, harsh and exciting -  
over and over announcing your place  
in the family of things.

## *The Summer Day*

By Mary Oliver

Who made the world?  
Who made the swan, and the black bear?  
Who made the grasshopper?  
This grasshopper, I mean-  
the one who has flung herself out of the grass,  
the one who is eating sugar out of my hand,  
who is moving her jaws back and forth instead of up and down-  
who is gazing around with her enormous and complicated eyes.  
Now she lifts her pale forearms and thoroughly washes her face.  
Now she snaps her wings open, and floats away.  
I don't know exactly what a prayer is.  
I do know how to pay attention, how to fall down  
into the grass, how to kneel down in the grass,  
how to be idle and blessed, how to stroll through the fields,  
which is what I have been doing all day.  
Tell me, what else should I have done?  
Doesn't everything die at last, and too soon?  
Tell me, what is it you plan to do  
with your one wild and precious life?