

## Is Hell Exothermic or Endothermic? (Type 1)

Dr. Schambaugh, of the University of Oklahoma School of Chemical Engineering, Final Exam question for May of 1997. Dr. Schambaugh is known for asking questions such as, "why do airplanes fly?" on his final exams. His one and only final exam question in May 1997 for his Momentum, Heat and Mass Transfer II class was: "Is hell exothermic or endothermic? Support your answer with proof."

Most of the students wrote proofs of their beliefs using Boyle's Law or some variant. One student, however, wrote the following:

"First, we postulate that if souls exist, then they must have some mass. If they do, then a mole of souls can also have a mass. So, at what rate are souls moving into hell and at what rate are souls leaving? I think we can safely assume that once a soul gets to hell, it will not leave.

Therefore, no souls are leaving. As for souls entering hell, let's look at the different religions that exist in the world today. Some of these religions state that if you are not a member of their religion, then you will go to hell. Since there are more than one of these religions and people do not belong to more than one religion, we can project that all people and souls go to hell. With birth and death rates as they are, we can expect the number of souls in hell to increase exponentially.

Now, we look at the rate of change in volume in hell. Boyle's Law states that in order for the temperature and pressure in hell to stay the same, the ratio of the mass of souls and volume needs to stay constant. Two options exist:

If hell is expanding at a slower rate than the rate at which souls enter hell, then the temperature and pressure in hell will increase until all hell breaks loose.

If hell is expanding at a rate faster than the increase of souls in hell, then the temperature and pressure will drop until hell freezes over.

So which is it? If we accept the postulate given to me by Theresa Banyan during my Freshman year, "that it will be a cold night in hell before I sleep with you" and take into account the fact that I still have NOT succeeded in having sexual relations with her, then Option 2 cannot be true...Thus, hell is exothermic."

The student, Tim Graham, got the only A.

## Thermodynamics Exam (Type 2)

A thermodynamics professor had written a take home exam for his graduate students.

It had one question:

Is hell exothermic or endothermic? Support your answer with a proof.

Most of the students wrote proofs of their beliefs using Boyle's Law or some variant. One student, however, wrote the following:

First, we postulate that if souls exist, then they must have some mass. If they do, then a mole of souls can also have a mass. So, at what rate are souls moving into hell and at what rate are souls leaving? I think that we can safely assume that once a soul gets to hell, it will not leave.

Therefore, no souls are leaving. As for souls entering hell, let's look at the different religions that exist in the world today. Some of these religions state that if you are not a member of their religion, you will go to hell. Since there are more than one of these religions and people do not belong to more than one religion, we can project that all people and all souls go to hell. With birth and death rates as they are, we can expect the number of souls in hell to increase exponentially.

Now, we look at the rate of change in volume in hell. Boyle's Law states that in order for the temperature and pressure in hell to stay the same, the ratio of the mass of souls and volume needs to stay constant.

So, if hell is expanding at a slower rate than the rate at which souls enter hell, then the temperature and pressure in hell will increase until all hell breaks loose.

Of course, if hell is expanding at a rate faster than the increase of souls in hell, then the temperature and pressure will drop until hell freezes over.

It was not revealed what grade the student got.