## Wind Study is intended for grades 5-8 and 8-11 Questions posted on: Monday Answers posted on: Friday Find downloadable one pagers at www.oneenergy.com/one-energy-feed

## 2023Q9

## EMT CALCULATIONS

One Energy trains our employees as Emergency Medical Technicians (EMT) and Advanced Emergency Medical Technicians (AEMT), and we are the only non-EMS company in Ohio that is state licensed at these levels. Being trained at these levels allows us to provide the best pre-hospital trauma care that is legally permitted.



Our EMTs training to give patients oxygen and life-saving care!

EMTs and AEMTs can offer Basic Life Support, which includes monitoring vital signs like breathing rates and blood pressure. Breathing rate is the number of breaths a person takes per minute. The normal breathing rate for an adult is about 12-20 breaths per minute. A breathing rate above or below this range can indicate a medical issue.

Blood pressure (BP) is the pressure that circulating blood exerts against the vessels' walls. When your heart contracts, it pushes oxygenated blood through your circulatory system. EMTs express BP by two numbers: systolic and diastolic pressures. Systolic pressures occur when the heart contracts and diastolic pressures occur when the heart relaxes. For example, a person's BP can be measured and recorded as 120/80 where the systolic pressure is 120 mm Hg, and the diastolic pressure is 80 mm Hg.

Level 1: An EMT responds to a medical situation for someone fainting (sudden drop in BP). Upon arrival, the patient is responsive and alert, but visibly shaken up. The EMT proceeds to assess vital signs and records a BP of 115/75 and a breathing rate of 12 breaths per minute.

Using the recorded information, what is the patient's pulse pressure (or the difference between systolic and diastolic pressures)?

Level 2: Tidal volume is the amount of air that enters a person's lungs during normal breathing. This is usually about 500 milliliters.

If a person's breathing rate is 15 breaths per minute, what is the total volume of air (in liters) that will have entered their lungs over the course of an hour?