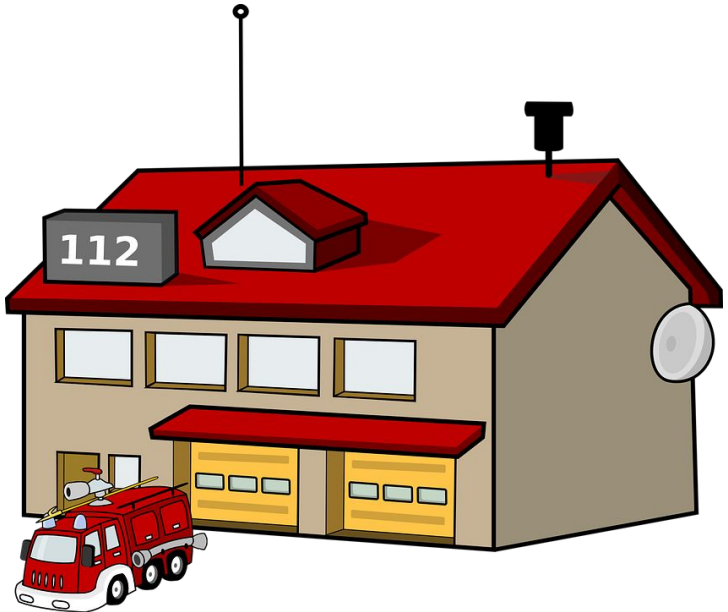
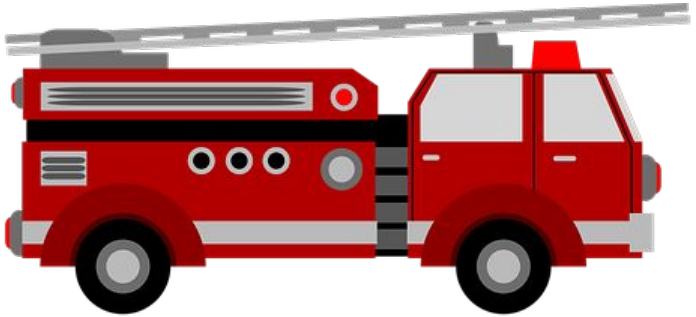
FIREFIGHTER



What does a Firefighter do?

- Firefighters respond to emergency situations and protect people, the environment and property from all types of accident and emergencies.
  - prevent fires, act as emergency medical technicians (EMT) and investigate the causes of fires.
- A firefighter is almost always the first official "on the scene" of fires, car accidents, or other emergencies, which is why they are also sometimes called "first responders."
- Enforce fire safety in local community



How do Firefighters use math?

- They use basic math skills like addition, subtraction and multiplication
  - Calculating volumes required for the air they breathe in SCBA
  - Calculating the water/foaming agent ratios
  - Estimating heights, distances and volumes
  - Determining manpower and other logistic requirements
  - Estimating evacuation zone distances.
- Firefighting Hydraulics (EP = NP + FL + APP + ELEV)

Math Problem

Fire flow formula: [(length x width) ÷ 3] x [percent of involvement]

Used to determine the amount of water (in gpm: gallons per minute) required to extinguish the fire.

An engine company officer arrives on the scene of a one-story residential structure (of Height: 100 ft and Width: 50 ft) on fire with 50% involvement.

The area of the structure is 100 x 50 = 5,000 ft^2

then divided by 3 : 5,000 ft^2/ 3 =1,666

then 50%= 0.50 : 1,666 x 0.50= 833 gpm (gallons per minute)

Education

- Get a Degree in Fire Science:
  - Certificates: training in a particular area, such as fire inspection or arson investigation, short courses that take less than one year to complete, and are open to high school graduates.
  - Associate Degrees: offered by community colleges and typically take two years of full-time study to complete. Must have a high school diploma to enroll in an associate degree program. Fire science associate degrees prepare students for entry-level firefighting positions.
  - Bachelor's Degrees: takes four years of full-time study. More and more entry-level candidates are pursuing bachelor's degrees as a competitive advantage to getting hired.
  - Master's Degrees: terminal degrees – the most advanced degree you can obtain – in the field of fire science.Takes two years of full-time work, although many pursue their master's degrees on a part-time basis. Firefighters interested in becoming chiefs or holding other high-level leadership positions should consider obtaining a master's degree.

Education

- Meet the basic requirements:
  - 20/20 eyesight
  - a high school diploma
  - own a clean criminal record
  - at least 18 years old (21 in some agencies)
- Start off as a volunteer
- CPR training and be in good physical conditions
- Must complete about 600 hours of training over the course of 12 to 14 weeks at a fire academy designated by a hiring fire department.

Work Cited

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