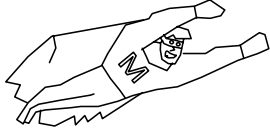
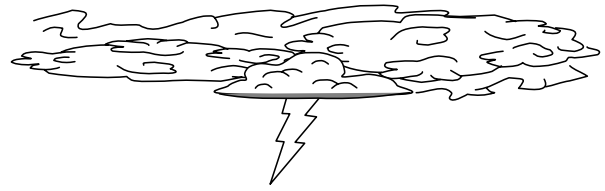


PROBLEM OF THE WEEK - 5

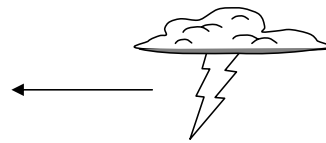
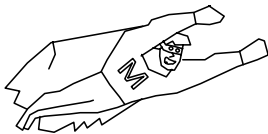
MATHMAN

Mathman is flying 720 miles per hour (mph) towards a storm. He is 8 miles away from it when he sees a bolt of lightning. Assuming that sound takes 5 seconds to travel one mile, how long will it take him to hear the thunder from the lightning bolt?



PROBLEM OF THE WEEK - ANSWER AND HELP

You have to consider both Mathman and the thunder's speed to calculate the answer.



We need to first change Mathman's speed to miles per second. To do that we need to divide by 60 to change it to minutes and then divide again by 60 to get miles per second.

720 miles per hour

$$= \frac{720}{60} = 12 \text{ miles per minute}$$

$$= \frac{12}{60} = .2 \text{ miles per second}$$

The thunder takes five seconds to travel one mile, which means every mile takes five seconds or:

$$1 \text{ mile} = 5 \text{ seconds}$$

$$2 \text{ miles} = 10 \text{ seconds}$$

$$3 \text{ miles} = 15 \text{ seconds}$$

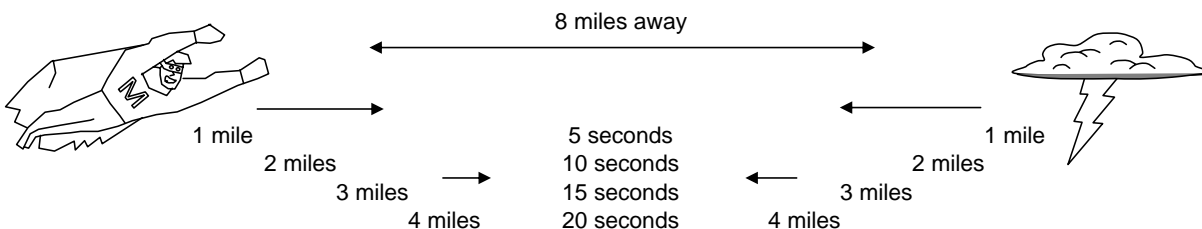
$$4 \text{ miles} = 20 \text{ seconds}$$

and so on.

This tells us it will also take Mathman five seconds to travel one mile.

$$.2 \times 5 = 1 \text{ mile}$$

$$1 \times 5 = 5 \text{ seconds}$$



After twenty seconds they will both have traveled four miles towards each other, which is a total distance of eight miles.

It will take 20 seconds for the sound of the lightning bolt to reach Mathman (if he stays at the exact same speed).