



Fueling Up for the Journey

Teacher Do you think you can eat more than a little shorebird?

Find out by completing this math teaser, using the information to solve the mystery below.

Math Teaser

How many hamburgers would you need to double your weight?

Here is the information that can help you solve this mystery.

Just before they migrate, many birds gain and store large amounts of fat directly above their breastbone. The fat provides energy for migrations. To make up for the weight lost during their long flights, shorebirds feed nearly continuously on insects, small worms and other food.

Although they may arrive at their resting area half starved, they can nearly double their weight in just two weeks. This is quite impressive since an 80 pound person would have to eat one McDonald's hamburger every 10 minutes, day and night, for two weeks to match a similar weight gain. This isn't possible for people, but it is for shorebirds! They can gain fat to fuel long flights of up to 70 hours without a rest at speeds of up to 60 miles/hour. (Hint: How many "10 minutes" are there in 2 weeks?)

Answer: 2, 016 hamburgers.

$$24 \text{ hours} \times 14 \text{ days} = 336 \text{ total hours}$$

$$336 \text{ hours} \times 60 \text{ min/hrs} = 20,160 \text{ total minutes}$$

$$20,160 \text{ min.} / 10 \text{ min} = 2,016 \text{ hamburgers}$$

OR

There are 6 ten min. periods in 1 hour.

$$6 \times 24 \text{ hours} = 144 \text{ hours}$$

$$144 \text{ hours} \times 14 \text{ days [2 weeks]} = 2,016 \text{ hamburgers}$$