

## Are Bicycles Fast Enough?

If you live two miles away from school:

- a. How long would it take you to ride your bike there? Assume a bike travels at 12 mph (not speed-fast, but a decent pace).

How do you write that speed as a fraction?  $\frac{\square \text{ miles}}{\square \text{ minutes}}$



OK, so reduce that fraction to find out how many minutes it takes to ride one mile.

$$\frac{\square \text{ miles}}{\square \text{ minutes}} \div \frac{12}{12} = \frac{\square \text{ mile}}{\square \text{ minutes}}$$

What does this mean? You can go  $\square$  mile in  $\square$  minutes.

What does this tell you about the time it takes to ride 2 miles?

$$\frac{\square \text{ mile}}{\square \text{ minutes}} \times \frac{2}{2} = \frac{\square \text{ miles}}{\square \text{ minutes}}$$

So, 2 miles would take  $\square$  minutes on your bike.

**FYI**  
mph = miles per  
hour  
mi. = miles

$$\frac{60 \text{ minutes}}{1 \text{ hour}}$$

- b. What if an adult drives you in a car that travels 30 mph?

How would you write that as a fraction?  $\frac{\square \text{ miles}}{\square \text{ minutes}}$

OK, so reduce that fraction to find out how many minutes it takes to drive one mile.

$$\frac{\square \text{ miles}}{\square \text{ minutes}} \div \frac{30}{30} = \frac{\square \text{ mile}}{\square \text{ minutes}}$$

What does this mean? You can go  $\square$  mile in  $\square$  minutes.

$$\frac{\square \text{ mile}}{\square \text{ minutes}} \times \frac{2}{2} = \frac{\square \text{ miles}}{\square \text{ minutes}}$$

So, 2 miles would take  $\square$  minutes in a car or truck.

**Remember:**

It might also take longer to find a parking space for your car, and that space will likely be farther away from the entrance than a bike rack.

## A Year's Worth of Driving to School



a. How many miles do YOU travel to school in a year?

# school days	X	miles from home to school	X	2 trips per day (there & back)	=	miles I travel for school per year
180	X		X	2	=	_____ miles

b. How much pollution is put in the air by driving a car or truck to school each year?

According to the Pima Association of Governments, for every mile driven in a gasoline vehicle, we put 0.6 pounds of pollutants (including greenhouse gases) into the air.

# miles per year	X	0.6 pounds of pollution	=	pounds of pollution from driving to school in one year
	X	0.6	=	_____ pounds of pollution by driving

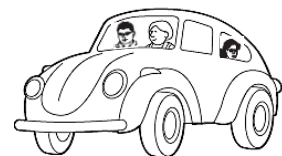
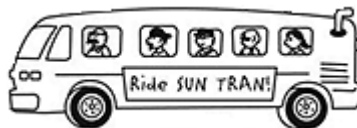
c. How much pollution is put in the air by riding a bicycle?

There are zero pollution emissions from driving a leg-powered bicycle!

# miles per year	X	0 pounds of pollution	=	pounds of pollution from riding to school in one year
	X	0	=	_____ pounds of pollution by riding a bicycle

What can YOU do to reduce air pollution? Drive Less and Drive Smart!

- Walk there
- Bus there
- Bike there
- Ride share
- Combine errands
- Avoid vehicle idling (especially parents picking up kids from school)
- Maintain vehicles: Keep tires properly inflated, check/change air filter, etc.



**For more ideas:** → Pima County Environmental Quality Clean Air Program • [www.pima.gov/deq](http://www.pima.gov/deq)