8-4 MATH TALKS
DATA TALK A

US POPULATION THROUGH THE DECADES
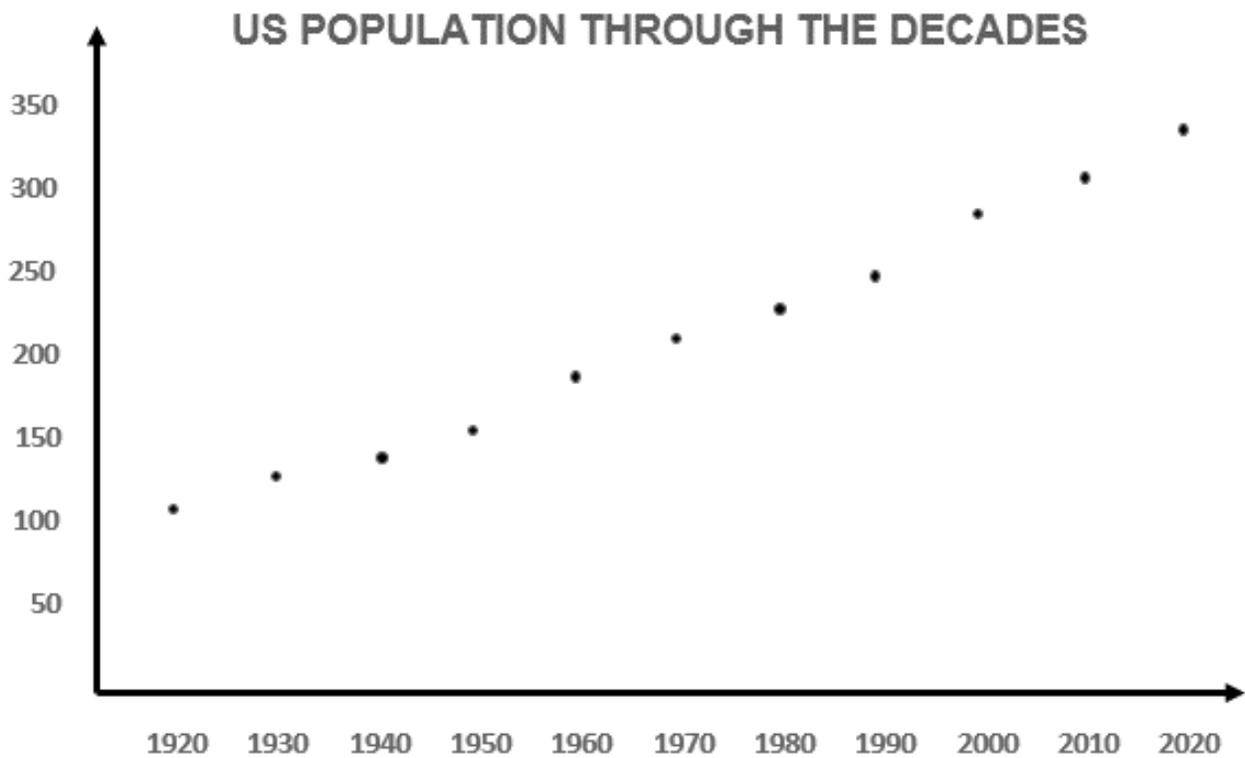

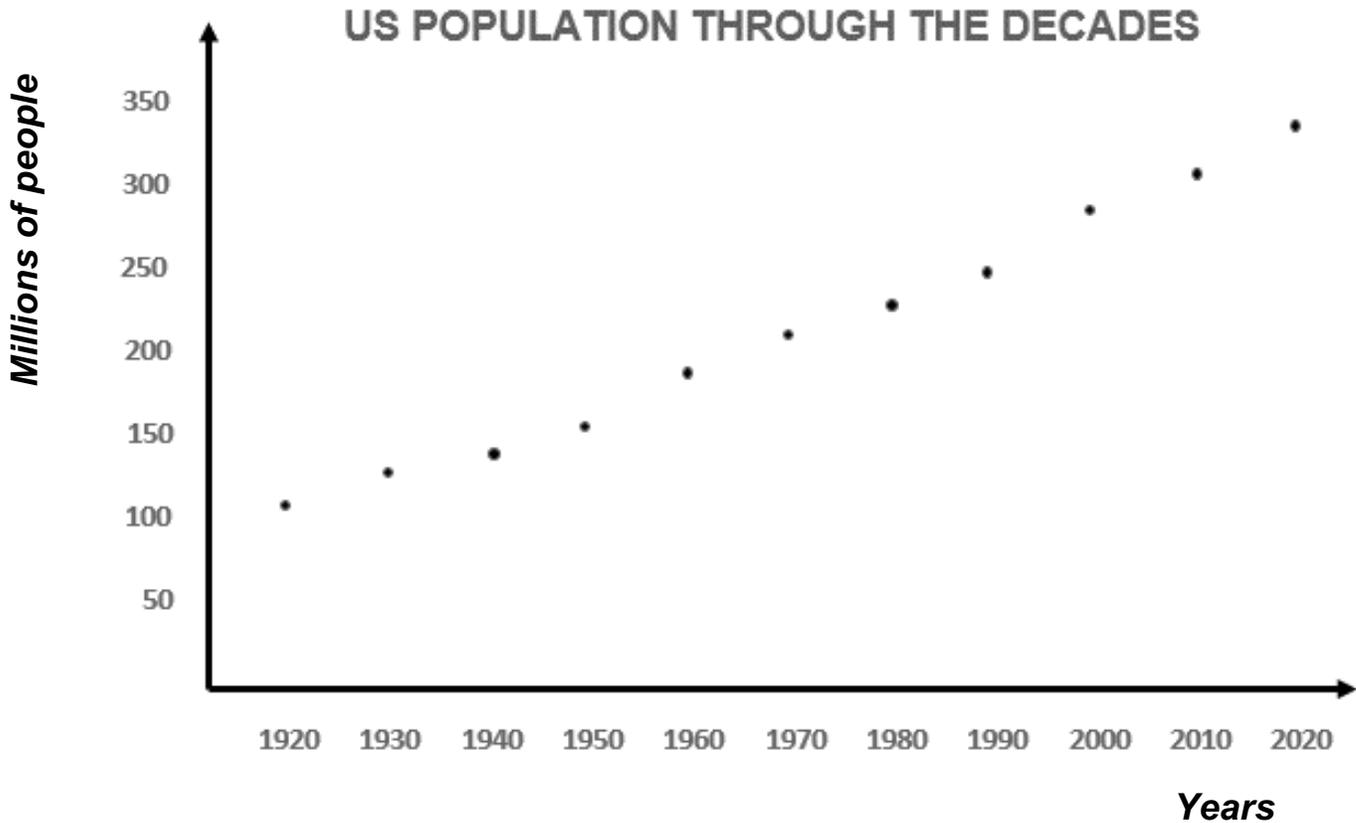*What could the horizontal axis represent?*
years

The vertical?
millions of people

8-4 MATH TALKS
DATA TALK A

US POPULATION THROUGH THE DECADES

(Graph: y-axis labeled "Millions of people" with values 50, 100, 150, 200, 250, 300, 350; x-axis labeled "Years" with values 1920, 1930, 1940, 1950, 1960, 1970, 1980, 1990, 2000, 2010, 2020. Data points increase from about 105 million in 1920 to about 335 million in 2020.)

Does this represent an increase or decrease in population?
How do you know?

Increase: as years increase, so does population

Does the change appear to be constant over time?
How do you know?

Somewhat constant as the increase from decade to decade is about the same.

About how many times more people are there
in the US now compared to 100 years ago?

350 million ÷ 100 million is about 3.5 times

What could be some positive aspects about population growth?
Negative?

Answers will vary.
Positive – more people may coincide with economic growth, more innovation, more diversity, etc.
Negative – more people may coincide with more pollution, more resources taken up, etc.

8-4 MATH TALKS
DATA TALK B

Boys in middle and high school sometimes use
protein supplements and steroids.
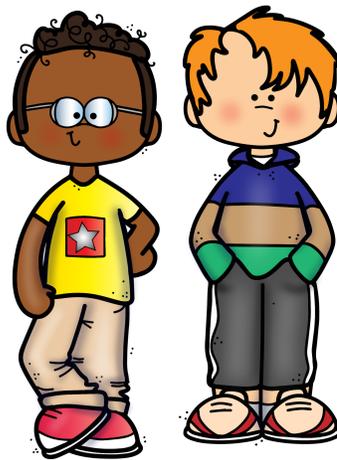
What % have tried protein supplements?

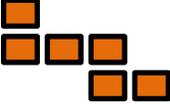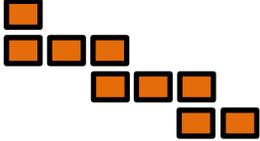*What number seems too low?   Too high?   About right?*

38%
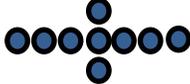
What % have experimented with steroids?

What number seems too low?   Too high?   About right?

7%

8-4 MATH TALKS
PICTURE TALKS

	Step 1	Step 2	Step 3
A			
B			
C			
D			

There are many different ways to see a pattern grow and to represent it in equivalent symbolic expressions. Show students one set per day.

Use the sentence frame, "Start with ___ and add ___ each time" to help as needed.

How is the pattern growing? Explain using words or with an equation.

What would the next picture look like in the pattern?

How many ___ would be in the 5th step? The 12th step?

A: Start with 3 rectangles and add 3 each time. Step 5: 15; Step 12: 36
B: Start with 5 circles and add 2 each time. Step 5: 13; Step 12: 27
C: Start with 1 star and add 4 each time. Step 5: 17; Step 12: 45
D: Start with 2 happy faces and add 3 each time. Step 5: 14; Step 12: 35

8-4 MATH TALKS
NUMBER TALKS

A

You need to read a 300-page book for your English class.
Would you rather…

Option 1	**Option 2**
Read 20 pages per night.	Read 45 pages every other night.

B

You are earning extra money babysitting.
Would you rather…

Option 1	**Option 2**
Babysit 4 kids for 6 hours for $45.	Babysit 3 kids for 8 hours for $52.

C

You are driving to the beach and want to get there quickly.
Would you rather…

Option 1	**Option 2**
Drive 45 miles in traffic at a rate of 35 miles per hour.	Drive 100 miles in less traffic at a rate of 65 miles per hour.

D

You are in charge of purchasing sports drink for your soccer team.
Would you rather…

Option 1	**Option 2**
Purchase packages of 6 bottles at 12 oz each for $5.00.	Purchase packages of 12 bottles at 9 oz each for $9.00.

Discuss one set per day.

Which option would you choose? Be prepared to justify your reasoning.
Answers, preferences, and opinions may vary if justified. One explanation given for each.
A: Option 2 (more pages read over time)
B: Option 1 (more money per hour)
C: Option 1 (less distance and less time)
D: Option 1 (cheaper per ounce)