

Lesson 5

**How Can We Apply
What We Have Learned?**

Hilleman & Vaccines
Student Pages

Graph of the Week

January _____, 2021

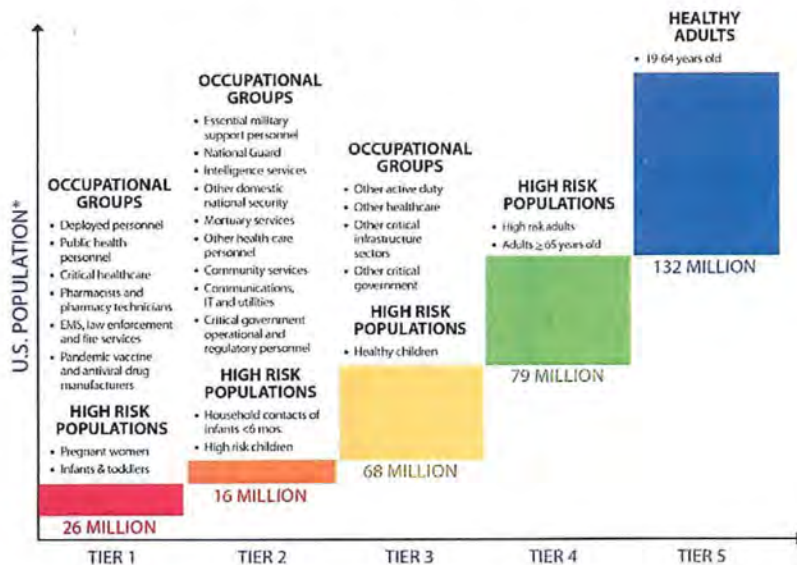
Name _____

Analyze the graphs below and write a reflection on what you think the graphs are communicating to you. To guide you with your response, start with some observations.

- What are the topics of the graphs?
- What quantities are being compared? (If there are x- and y- axes, what do they represent?)
- What are some observations that you can make based on the graphs?
- What do you foresee happening in the next 10 years?

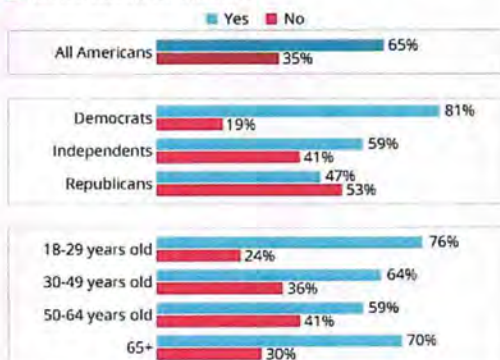
Questions to ask when reading graphs:

- Is there an upward or downward trend?
- Are there any sudden spikes in the graph?
- What is being compared in the graph?
- What prediction can I make for the future?
- What inferences can I make about the graph?



A Third Of Americans Unwilling To Get Covid-19 Vaccine

Share of U.S. adults willing to get an FDA approved, no cost vaccine for Covid-19



n=7,632 (July 20-August 02, 2020)
Source: Gallup



statista

Graph of the Week

February _____, 2020

Name _____

Analyze the graphs below and write a reflection on what you think the graphs are communicating to you. To guide you with your response, start with some observations.

- What is the topic of the graph?
- What quantities are being compared? (If there are x- and y- axes, what do they represent?)
- What are some observations that you can make based on the graphs?
- What do you foresee happening in this data 10 years from now?

Questions to ask when reading graphs:

- Is there an upward or downward trend?
- Are there any sudden spikes in the graph?
- What is being compared in the graph?
- What prediction can I make for the future?
- What inferences can I make about the graph?

Wuhan coronavirus compared to other major viruses

VIRUS	YEAR IDENTIFIED	CASES	DEATHS	FATALITY RATE	NUMBER OF COUNTRIES
Marburg	1967	466	373	80%	11
Ebola*	1976	33,577	13,562	40.40%	9
Hendra	1994	7	4	57%	1
H5N1 Bird Flu	1997	861	455	52.80%	18
Nipah	1998	513	398	77.60%	2
SARS	2002	8,096	774	9.60%	29
H1N1**	2009	>762,630,000	284,500	0.02%	214*
MERS***	2012	2,494	858	34.40%	28
H7N9 Bird Flu	2013	1,568	616	39.30%	3
2019-nCoV*	2020	11,871	259	2.2%	24

*As of January 31, 2020

**Between 2009 and 2010

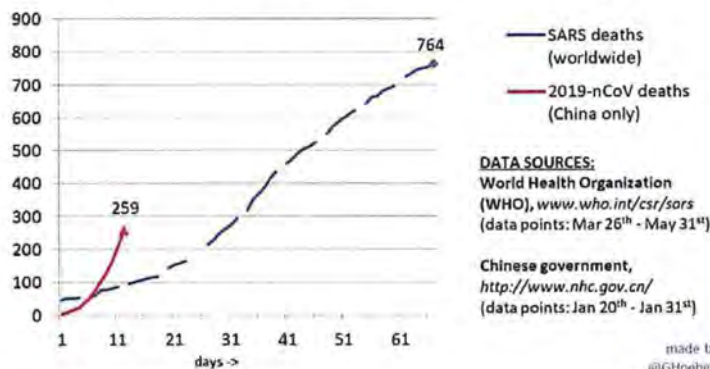
***As of November 2019

#Countries and overseas territories or communities

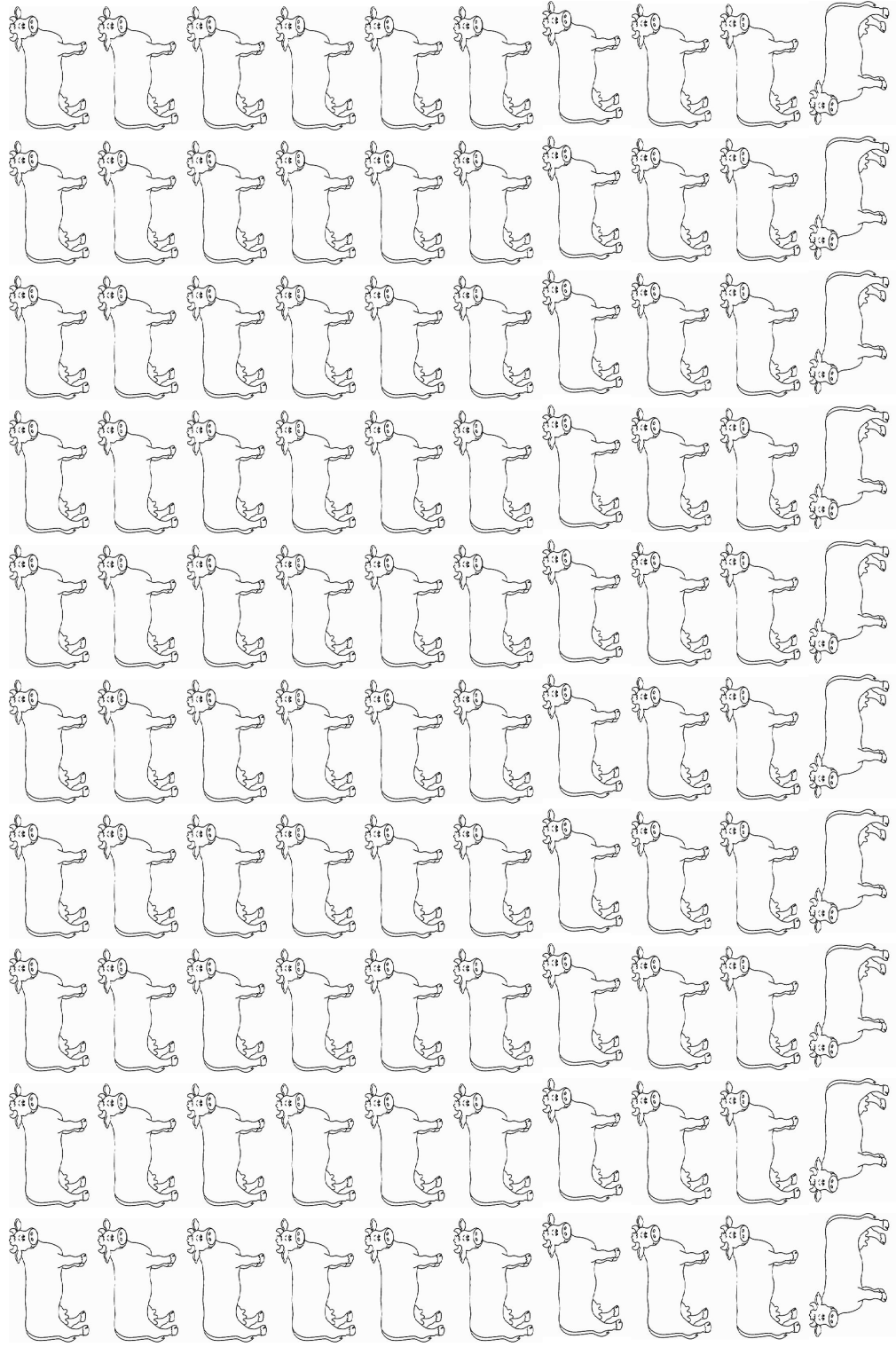
Sources: CDC; IJN; WHO; New England Journal of Medicine; Malaysian Journal of Pathology; CGTN; Johns Hopkins University; The Lancet; Reuters; CIORAP

BUSINESS INSIDER

DEATHS: SARS (2003) vs WUHAN CORONAVIRUS (2020)



BRSV in Cattle



BRSV in Cattle

The human virus RSV can cause severe problems for children under 10 months of age. Cattle can be infected with a similar virus called BRSV. There is a vaccination that many ranchers give to their cattle to prevent BRSV. What would happen if they didn't?

1. You own 90 heifers. They are NOT vaccinated for BRSV.
2. You bought 10 more heifers. How many do you have now?

90+10= _____ heifers

3. Oh no! One of your new heifers has BRSV. You will receive a piece of paper from your teacher telling you the fraction of your cows that have died! Use the array of heifers on the other side of the paper to make groups to represent your fraction.

_____ of 100= _____ dead heifers

4. Complete the bar graph on the board.

5. Since BRSV is a respiratory virus, how can it spread? _____

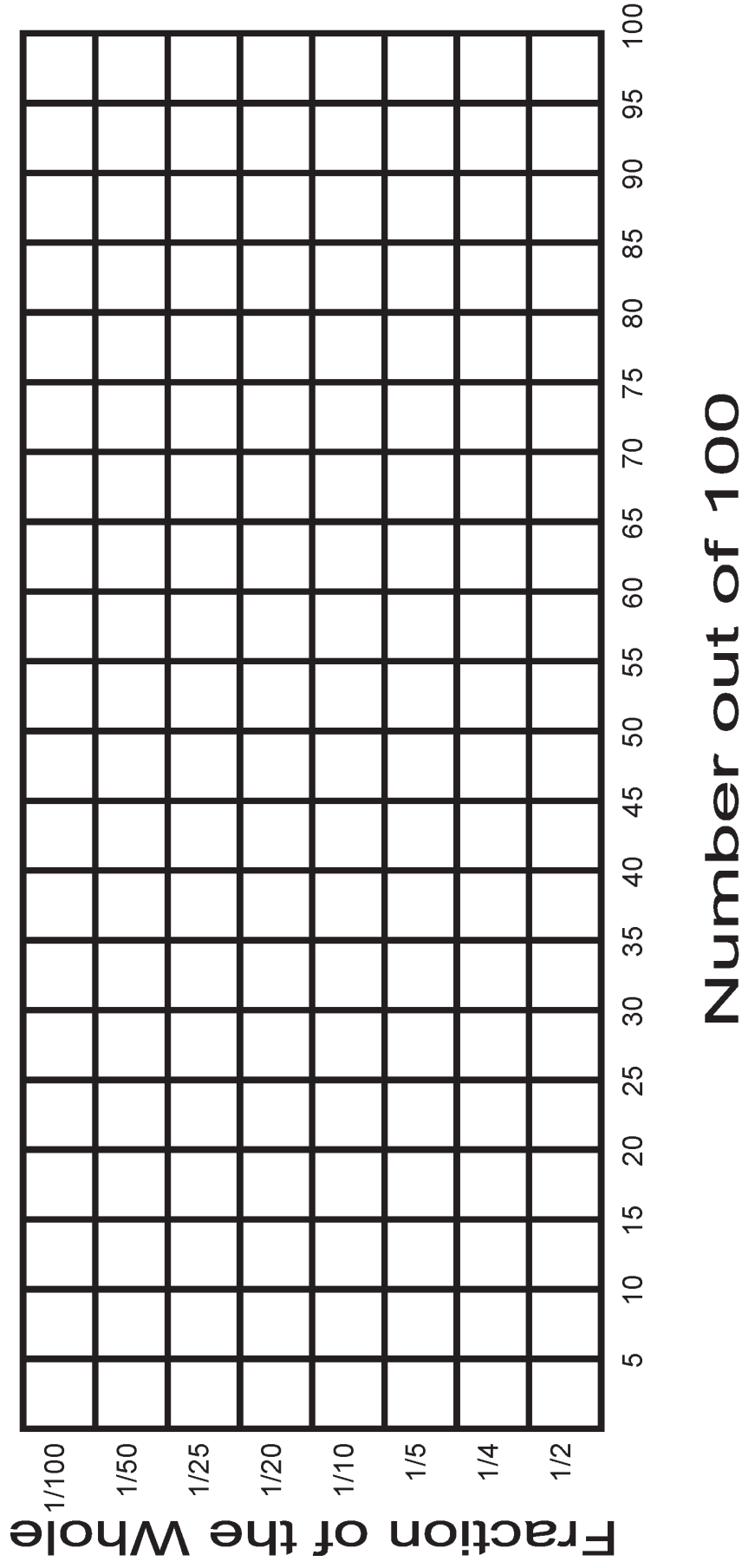
6. How could you prevent your heifers from catching BRSV from a contagious heifer?

7. If heifers were worth \$500 apiece, how much money would you lose

_____ dead heifers x \$500 = \$ _____



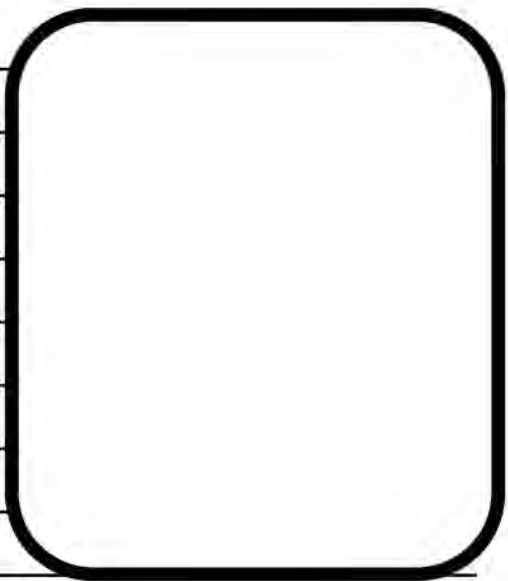
Number Represented by a Fraction of a Group of 100 (horizontal bar graph)





A Famous Scientist

Pretend you are a famous scientist.
What contribution will you make to our effort to conquer disease?
Will you discover a cure? Will you develop a vaccine?
Draw a picture of yourself and write your name underneath.



A series of horizontal lines for writing, consisting of 10 lines on the left side of the drawing box and 10 lines on the right side, below the name box.