

## Modeling Benchmark Percents and Fractions

For each scenario described below, choose **at least one** of the four bar models to represent it and fill in all the information you can.

- 1) 80 people were surveyed. 25% of them said that spring was their favorite season.



Use the model you chose to fill in the information in the table below:

	Number of people	Fraction of people	Percent of people
People who prefer spring			
People who do not prefer spring			
Total			

- 2) Out of 60 people surveyed, 45 of them said they watch more than three hours of tv each day.



Use the model you chose to fill in the information in the table below:

	Number of people	Fraction of people	Percent of people
People who watch more than 3 hours of tv			
People who do not watch more than 3 hours of tv			
Total			

## **Modeling Benchmark Percents and Fractions**

3) Half of the people surveyed said they are happy in their jobs. 35 people said they are happy.



Use the model you chose to fill in the information in the table below:

	Number of people	Fraction of people	Percent of people
People who said they are happy in their jobs			
People who did not say they are happy in their jobs.			
Total			

4) A job training program accepted 80% of the people who applied. 40 people were accepted.



Use the model you chose to fill in the information in the table below:

	Number of people	Fraction of people	Percent of people
People who were accepted into the program			
People who were not accepted into the program			
Total			

## **Modeling Benchmark Percents and Fractions**

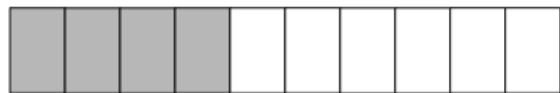
5) Your goal is to take 10,000 steps in a day. Yesterday you reached only 60% of that.



Use the model you chose to fill in the information in the table below:

	Number of steps	Fraction of steps	Percent of steps
Steps you took yesterday			
Steps by which you fell short of your goal			
Total			

6) You also try to take 250 steps every hour. So far this hour, you have taken 100 steps.

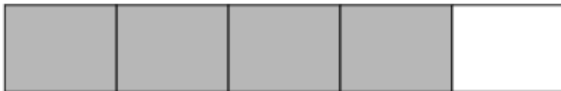


Use the model you chose to fill in the information in the table below:

	Number of steps	Fraction of steps	Percent of steps
Steps you have taken so far this hour			
Steps you still need to take to make your goal			
Total			

## Modeling Benchmark Percents and Fractions

- 7) In a survey, 75% of people said they prefer streaming video to cable. 180 people said they preferred streaming video.



Use the model you chose to fill in the information in the table below:

	Number of people	Fraction of people	Percent of people
People who prefer streaming video			
People who do not prefer streaming video			
Total			

- 8) 144 out of 160 people surveyed said they check their phones at least five times every hour.



Use the model you chose to fill in the information in the table below:

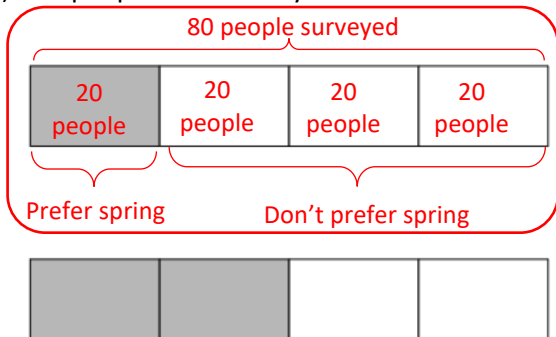
	Number of people	Fraction of people	Percent of people
People who check their phones at least five times every hour			
People who do not check their phones at least five times every hour			
Total			



# Modeling Benchmark Percents and Fractions

For each scenario described below, choose **at least one** of the four bar models to represent it and fill in all the information you can.

- 1) 80 people were surveyed. 25% of them said that spring was their favorite season.

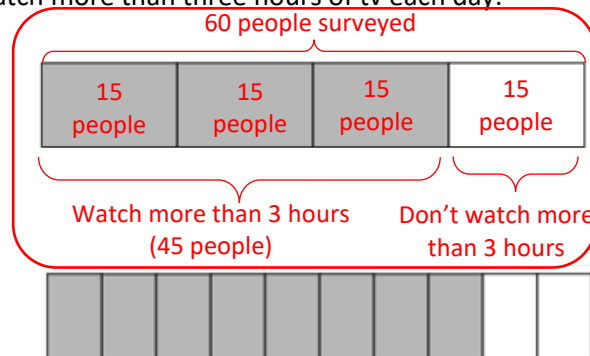
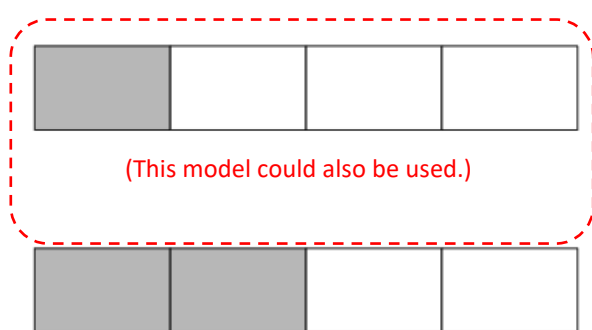


*Note: This model can also be used, using the unshaded part to represent the people who prefer spring.*

Use the model you chose to fill in the information in the table below:

	Number of people	Fraction of people	Percent of people
People who prefer spring	20	20/80 or $\frac{1}{4}$	25%
People who do not prefer spring	60	60/80 or $\frac{3}{4}$	75%
Total	80	80/80 or 1	100%

- 2) Out of 60 people surveyed, 45 of them said they watch more than three hours of tv each day.

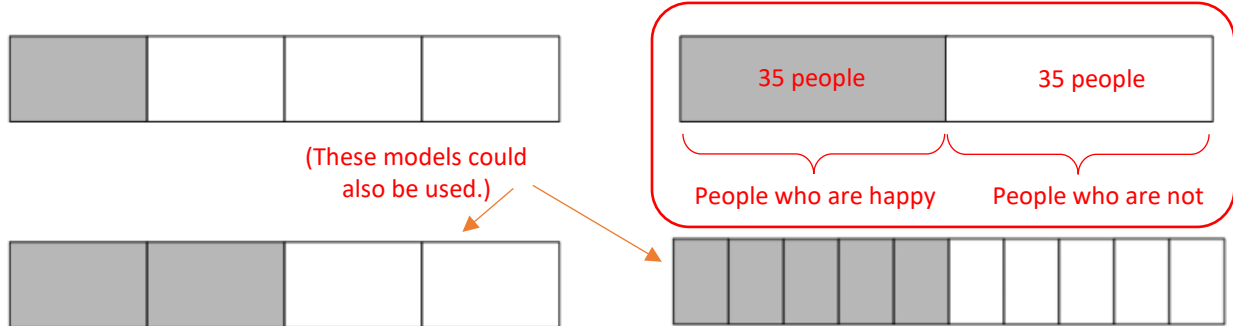


Use the model you chose to fill in the information in the table below:

	Number of people	Fraction of people	Percent of people
People who watch more than 3 hours of tv	45	45/60 or $\frac{3}{4}$	75%
People who do not watch more than 3 hours of tv	15	15/60 or $\frac{1}{4}$	25%
Total	60	60/60 or 1	100%

## Modeling Benchmark Percents and Fractions

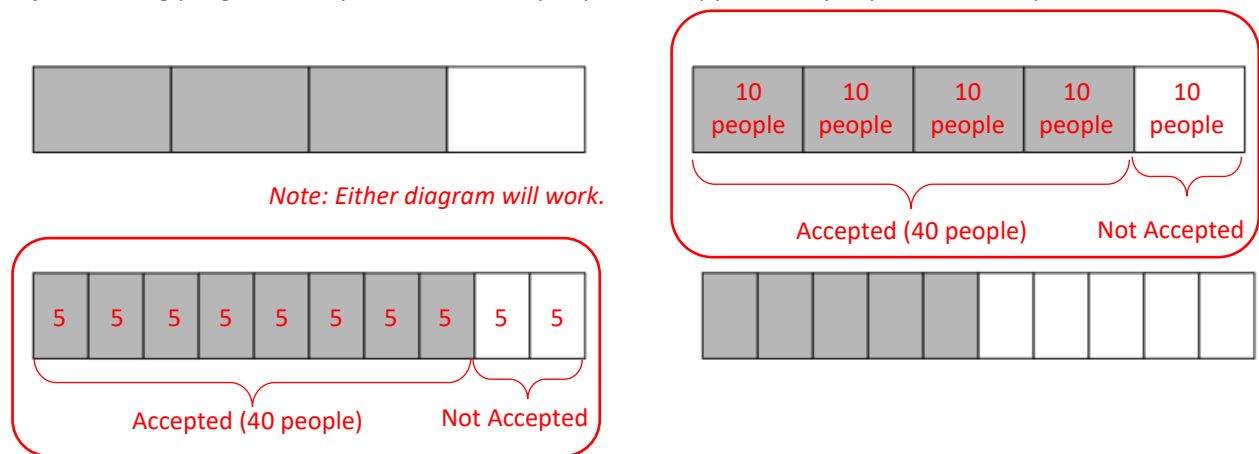
- 3) Half of the people surveyed said they are happy in their jobs. 35 people said they are happy.



Use the model you chose to fill in the information in the table below:

	Number of people	Fraction of people	Percent of people
People who said they are happy in their jobs	35	$35/70$ or $\frac{1}{2}$	50%
People who did not say they are happy in their jobs.	35	$35/70$ or $\frac{1}{2}$	50%
Total	70	$70/70$ or 1	100%

- 4) A job training program accepted 80% of the people who applied. 40 people were accepted.

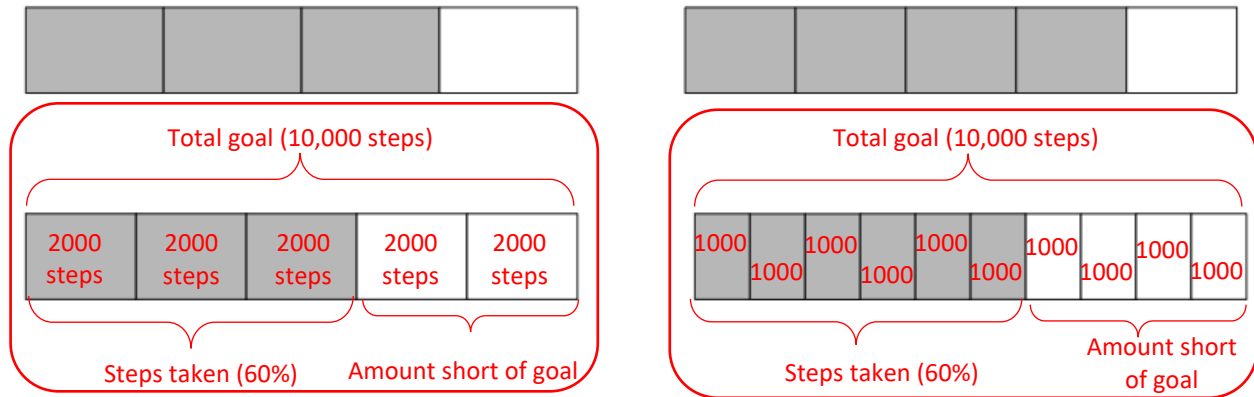


Use the model you chose to fill in the information in the table below:

	Number of people	Fraction of people	Percent of people
People who were accepted into the program	40	$40/50$ or $8/10$ or $4/5$	80%
People who were not accepted into the program	10	$10/50$ or $2/10$ or $1/5$	20%
Total	50	$50/50$ or 1	100%

## Modeling Benchmark Percents and Fractions

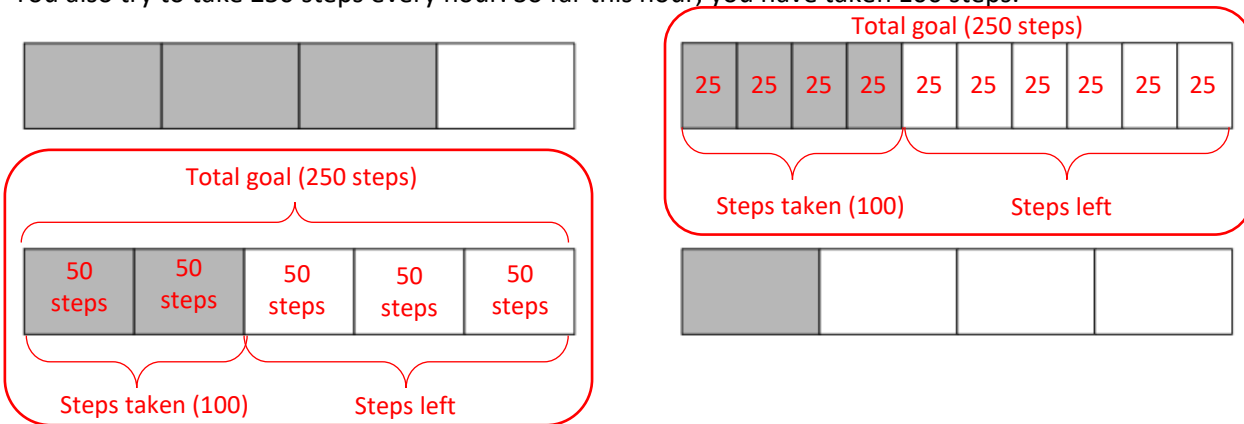
5) Your goal is to take 10,000 steps in a day. Yesterday you reached only 60% of that.



Use the model you chose to fill in the information in the table below:

	Number of steps	Fraction of steps	Percent of steps
Steps you took yesterday	6000	$6000/10000$ or $6/10$ or $3/5$	60%
Steps by which you fell short of your goal	4000	$4000/10000$ or $4/10$ or $2/5$	40%
Total	10000	$10000/10000$ or 1	100%

6) You also try to take 250 steps every hour. So far this hour, you have taken 100 steps.



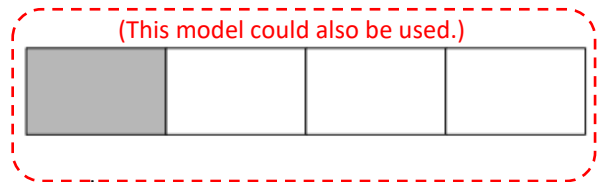
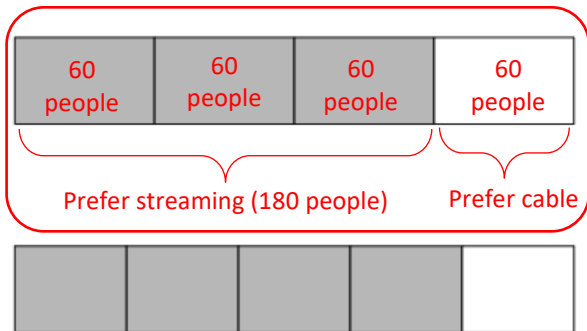
Use the model you chose to fill in the information in the table below:

	Number of steps	Fraction of steps	Percent of steps
Steps you have taken so far this hour	100	$100/250$ or $4/10$ or $2/5$	40%
Steps you still need to take to make your goal	150	$150/250$ or $6/10$ or $3/5$	60%
Total	250	$250/250$ or 1	100%



## Modeling Benchmark Percents and Fractions

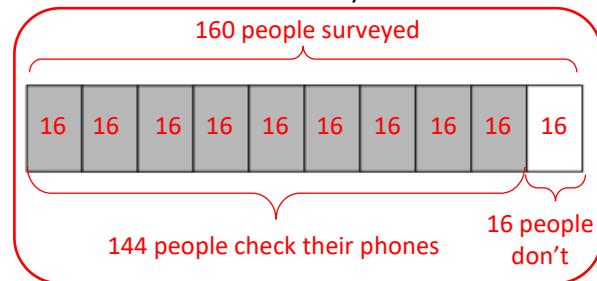
- 7) In a survey, 75% of people said they prefer streaming video to cable. 180 people said they preferred streaming video.



Use the model you chose to fill in the information in the table below:

	Number of people	Fraction of people	Percent of people
People who prefer streaming video	180	$180/240$ or $\frac{3}{4}$	75%
People who do not prefer streaming video	60	$60/240$ or $\frac{1}{4}$	25%
Total	240	$240/240$ or 1	100%

- 8) 144 out of 160 people surveyed said they check their phones at least five times every hour.



Use the model you chose to fill in the information in the table below:

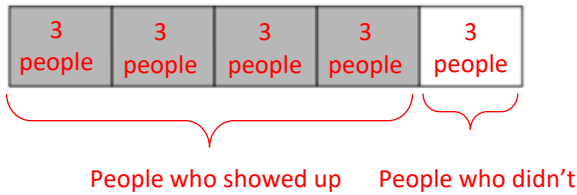
	Number of people	Fraction of people	Percent of people
People who check their phones at least five times every hour	144	$144/160$ or $9/10$	90%
People who do not check their phones at least five times every hour	16	$16/160$ or $1/10$	10%
Total	160	$160/160$ or 1	100%

# Modeling Benchmark Percents and Fractions

## Challenge scenarios:

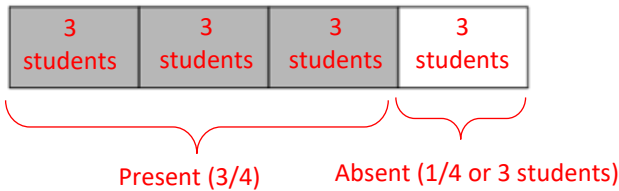
Create a model and a table for each of these scenarios.

- 1) 80% of the people who signed up for a yoga class showed up. 3 people didn't show.



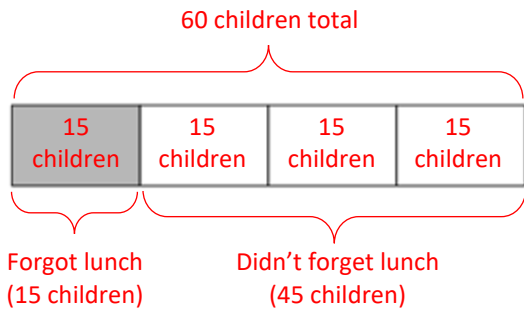
	Number of people	Fraction of people	Percent of people
People who showed up	12	12/15 or 4/5	80%
People who didn't show up	3	3/15 or 1/5	20%
Total	15	15/15 or 1	100%

- 2) A teacher reported that her class had 75% attendance on Monday. 3 students were absent that day.



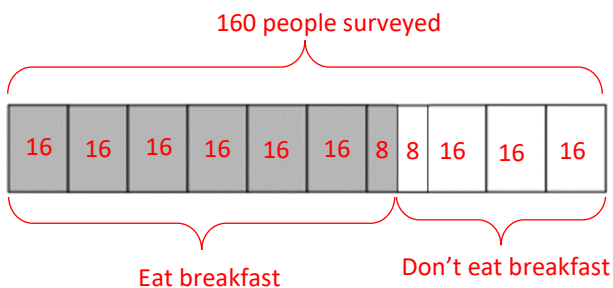
	Number of students	Fraction of students	Percent of students
Present	9	9/12 or ¾	75%
Absent	3	3/12 or ¼	25%
Total	12	12/12 or 1	100%

- 3) 15 of the 60 children on a field trip forgot to pack a lunch.



	Number of children	Fraction of children	Percent of children
Forgot lunch	15	15/60 or ¼	25%
Remembered lunch	45	45/60 or ¾	75%
Total	60	60/60 or 1	100%

- 4) 65% of 160 people surveyed said they eat breakfast every day.



	Number of people	Fraction of people	Percent of people
People who eat breakfast every day	104	104/160	65%
People who don't eat breakfast every day	56	56/160	35%
Total	160	160/160 or 1	100%