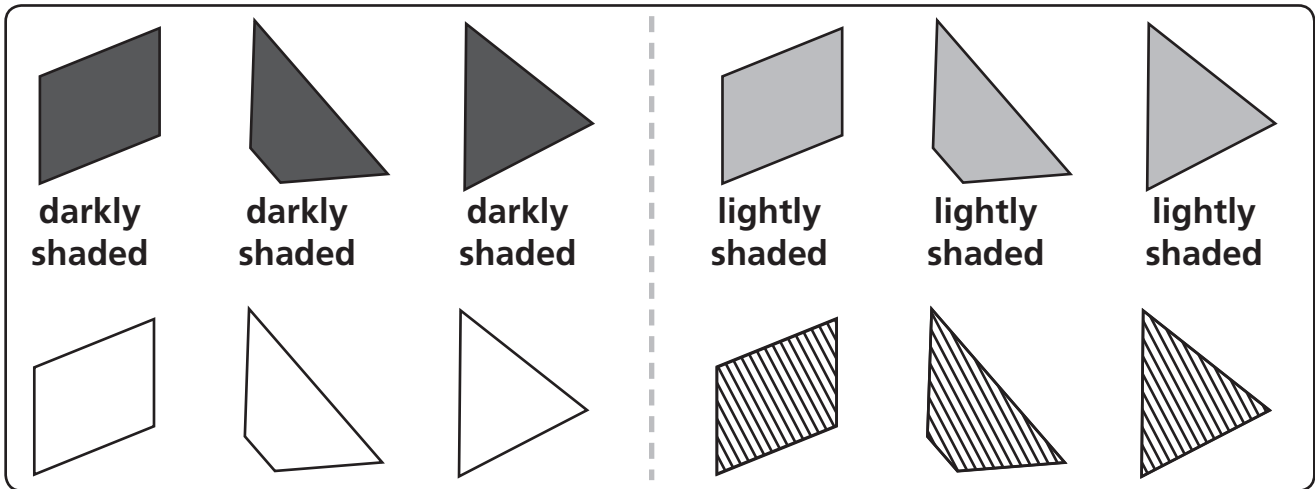


Finding Combinations of Attributes



1 What portion of the cards have a trapezoid without stripes? _____ out of _____

2 What portion of the cards have a darkly or lightly shaded parallelogram? _____

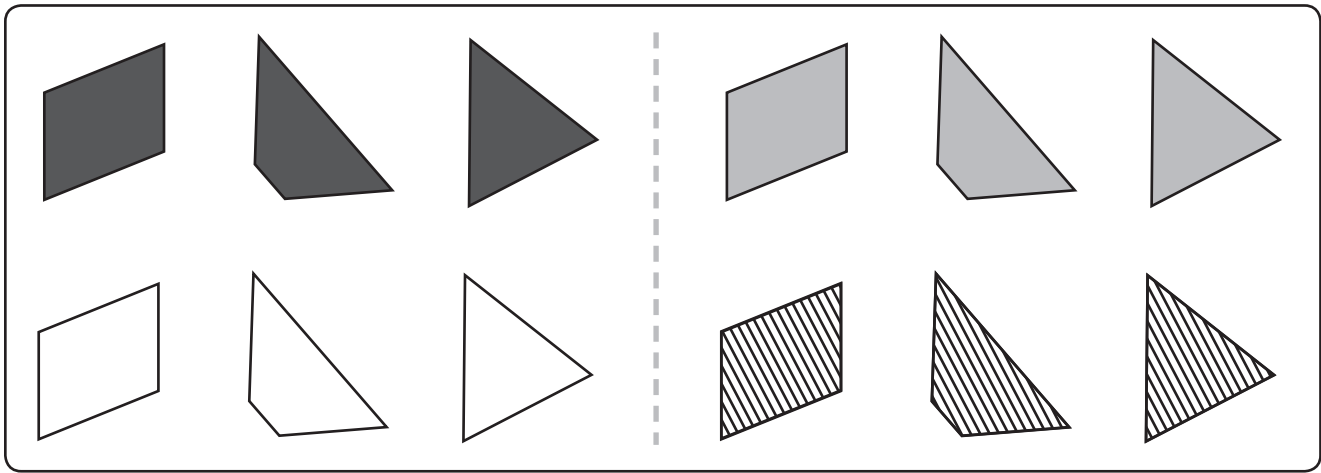
3 What portion of the cards have a darkly shaded triangle? _____

4 Describe a kind of card that appears in the deck fewer times than the darkly or lightly shaded parallelogram. _____

5 Describe a kind of card that appears 4 times out of the 12 cards. _____

6 Describe a kind of card that appears 8 times out of the 12 cards. _____

Describing the Likelihood of An Event



Complete each sentence in two ways:

1 4 out of 12 cards

have a parallelogram

2 $\frac{3}{12}$ of the cards

3 $\frac{1}{2}$ of the cards

4 If you draw one card,
it is likely that the card

Introducing Probability

Use your deck of attribute cards to follow these steps and answer each question.

1 What portion of the cards are striped blue? _____ out of _____

2 If you draw one card, what is the probability that it will be striped blue? _____

Remove the solid blue triangle from the deck and put it aside.

3 What portion of the remaining cards are striped blue? _____ out of _____

4 If you draw one card now, what is the probability that it will be striped blue? _____

Now, remove the green striped parallelogram and the solid green trapezoid and put them aside.

5 Now what portion of the cards are striped blue? _____ out of _____

6 If you draw one card now, what is the probability that it will be striped blue? _____

7 Which is more likely: drawing a striped blue card from the deck as it is now, or drawing a striped blue card from the full deck you started with? Explain your answer.

Drawing From a Deck of Attribute Cards

Imagine a bag of 12 marbles. Some are red, some are yellow, and some are blue.

1 If you know that 6 marbles are red and 3 are blue, _____ out of _____ then what portion are yellow?

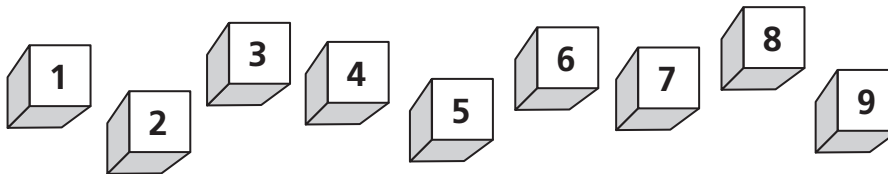
2 If 4 marbles are yellow, what portion of the marbles are not yellow? _____ out of _____

3 If the probability of picking a red marble out of the bag is $\frac{1}{2}$, what is the probability of picking a marble that is not red? _____

4 If the probability of picking a blue marble out of the bag is $\frac{4}{12}$ and the probability of picking a yellow marble is $\frac{4}{12}$, what is the probability of picking a red marble? _____

5 If $\frac{1}{2}$ of the marbles are red and $\frac{1}{4}$ are blue, what is the probability of picking a yellow marble? _____

Drawing Blocks



1 What portion of the blocks are numbered with multiples of 3? _____ out of _____

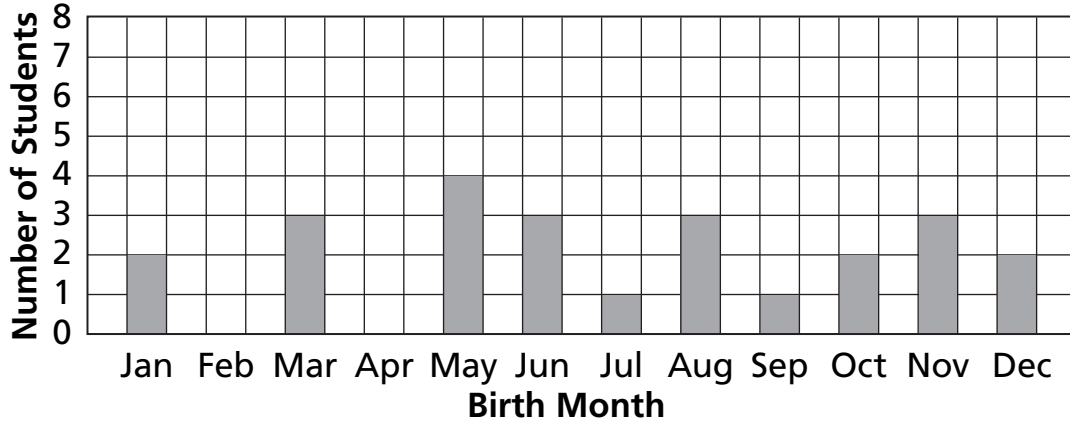
2 If you pick one block without looking, what is the probability that it will be a multiple of 3? _____

3 Imagine doing an experiment in which you pick a block at random 30 times. How many times would you expect to pick a multiple of 3? _____

4 If you did this experiment and picked a multiple of 3 3 times out of 30, would you be surprised? Why or why not?

Collecting and Analyzing Survey Data

Mr. Gottlieb’s class made a graph of the months students were born in.



1 Looking at this graph, can you tell whether more students were born in winter than in summer? Explain.

2 Looking at this graph, can you tell whether more boys than girls were born in May? Explain.

3 Write three pieces of information you know from looking at this graph.

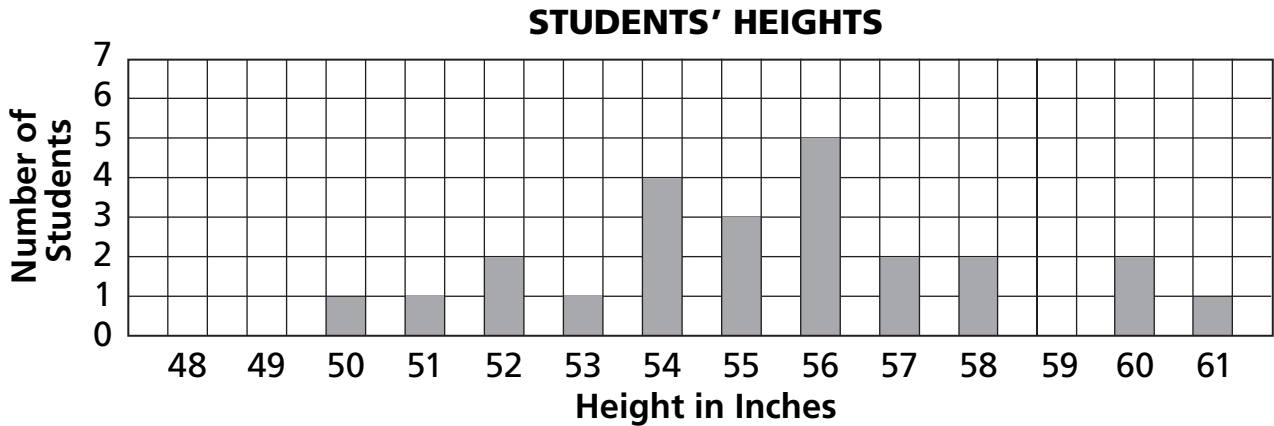
1. _____

2. _____

3. _____

Collecting Measurement Data

Here is a graph of the heights of the students in Dana's class.



Clues
Dana is shorter than at least half the students in the class.
Dana's height is one of the three most common heights.
At least one other student is the same height as Dana.
There are more students Dana's height than students 1 inch shorter than Dana.

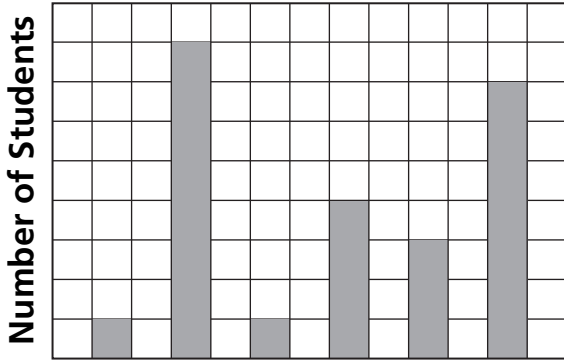
Use the clues to figure out how tall Dana is.

Dana is _____ inches tall.

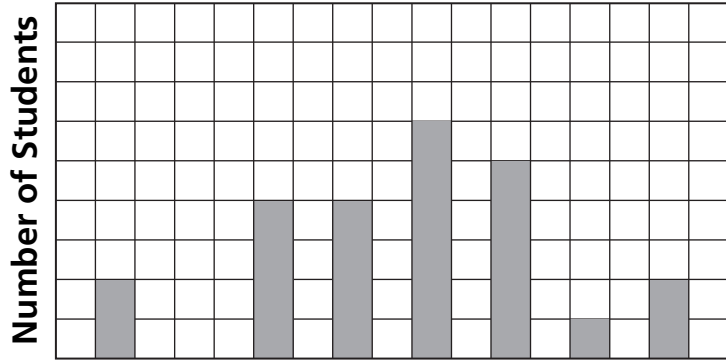
Analyzing Measurement Data

Jeremy surveyed his classmates about their heights and their favorite sports, but he forgot to label the graphs. The heights were listed in order from shortest to tallest. The sports were listed in alphabetical order.

GRAPH #1



GRAPH #2



1 Which label do you think belongs with each graph?

_____ goes with Graph # _____

_____ goes with Graph # _____

2 Explain your answer to Problem 1.
