Solution

To find a relative frequency, we will need to divide the frequency of the class, f, we are looking at by the sample size, n.

To begin with, the sample size in this case is

$$n = 4 + 3 + 9 + 5 + 6 = 27 .$$

Therefore, the relative frequency of the second class will be

$$\frac{f}{n} = \frac{3}{27} = \frac{1}{9}.$$

2.R.1 Exercises

Concept Check

True/False. Determine whether each statement is true or false. If a statement is false, explain how it can be changed so the statement will be true. (**Note:** There may be more than one acceptable change.)

1. In $\frac{11}{13}$, the denominator is 11.

2. $\frac{0}{6} = 0$

3. $\frac{17}{0}$ is undefined.

Practice

For the figure, a) write the fraction for the number of days remaining in June (not crossed out) and b) write the fraction for the number of days that have been crossed out for June.

4.

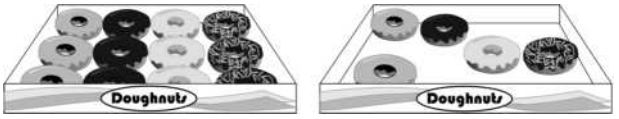
June

S	M	T	W	T	F	S
~~1~~	~~2~~	~~3~~	~~4~~	~~5~~	~~6~~	~~7~~
~~8~~	~~9~~	~~10~~	~~11~~	~~12~~	~~13~~	~~14~~
~~15~~	~~16~~	~~17~~	~~18~~	~~19~~	~~20~~	~~21~~
~~22~~	~~23~~	24	25	26	27	28
29	30					

5. Graph $\frac{3}{5}$ on a number line

Write the remaining amount as **a.** a mixed number and **b.** an improper fraction.

6. Isabella brought 2 boxes of doughnuts to a meeting. The figure shows the remaining amount of doughnuts.



7. Graph $3\frac{1}{4}$ on a number line.

8. Change $1\frac{3}{5}$ to an improper fraction.

9. Change $\frac{4}{3}$ to a mixed number.

Applications

Solve.

10. ***Grades:*** In a class of 35 students, 6 students received As on a mathematics exam. What fraction of students received an A? What fraction of students did not receive an A?

11. ***Nutrition:*** A certain brand of plain bagels has 146 calories per bagel. 115 calories come from the carbohydrates in the bagel. What fraction of the calories is from carbohydrates?

12. ***Frequency Distribution:*** Given the following frequency distribution of grades, compute the relative frequency for each class grade as a simplified fraction. The first class grade has been done for you.

Class Grade	Frequency	Relative Frequency
A	6	$\frac{6}{33}=\frac{2}{11}$
B	14	
C	9	
D	3	
F	1	
Total	$n=33$	

Writing & Thinking

13. In your own words, list the parts of a fraction and briefly describe the purpose of each part.

14. Show and explain, using diagrams and words, why $2\frac{3}{5}=\frac{13}{5}$.