

[1] Suppose Ann, Bob and Cindy want to share a cake that's half lemon and half vanilla, as shown

V	V	L	L
V	V	L	L

Ann likes lemon twice as much as vanilla (so she would see two vanilla squares as having the same value as one lemon square). Bob likes vanilla twice as much as lemon, and Cindy loves lemon but hates vanilla.

Using the lone divider method, Ann cuts the cake along the horizontal line right through the center. Bob picks the top four squares and leaves the bottom four squares for Ann.

(a) Show how Ann would divide her portion into three pieces that she sees as having equal value (circle the three pieces; assume she decides to cut only along vertical lines shown). Indicate which piece Cindy picks.

V	V	L	L
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(b) Do the same for Bob.

V	V	L	L
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(c) Fill in the blanks below, indicating how each person sees the value of the others' portions, assuming they all agree that the cake is worth \$12. Indicate every instance in which someone envies someone else.

	Ann's portion	Bob's portion	Cindy's portion
Ann's values			
Bob's values			
Cindy's values			

[2] Suppose Ann, Bob and Cindy decide not to cut the cake at all, but to use sealed bids to decide who gets the cake and to compensate the others with money. Assume Ann bids \$15, Bob bids \$12 and Cindy bids \$9. Determine who gets the cake and how much money that person pays the others in compensation.

[3] Do Problem 16 on p. 251.

[4] Correct the following errors:

(a) "A recent survey showed that support for the governor's program fell 10%, from 50% to 40%."

(b) "A gallon of gas recently sold for \$4.50, three times more than the \$1.50 price of a few years ago."

[5] (Be prepared to make other kinds of charts too.) Make a double stem and leaf plot using the two data sets given in Problem 4 on page 512.

[6] Make a single comparison histogram using the two data sets given in Problem 4 on page 512. Choose an appropriate bin length; justify the length you use.

[7] (Be prepared to discuss the advantages of other kinds of charts.) A survey of college students found that 67% have an after school job, 45% live off campus, 43% ride a bicycle to class, and 25% have not declared a major. Which would be the best choice to display this data: a bar chart, a line graph, a pie chart or a histogram? Justify your answer as to which is best (and why each of the others are not).

[8] Do Problem 4 on page 545.