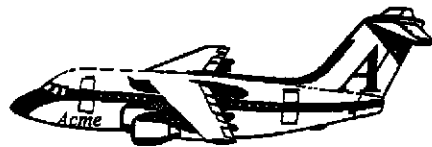
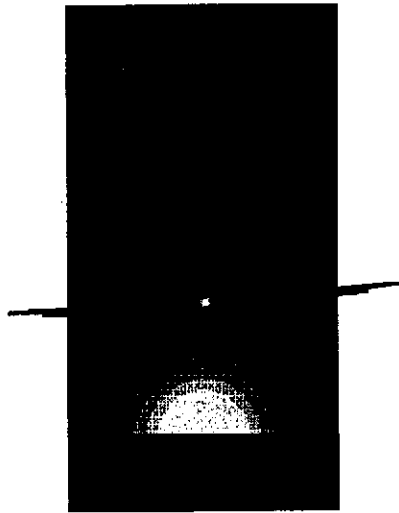


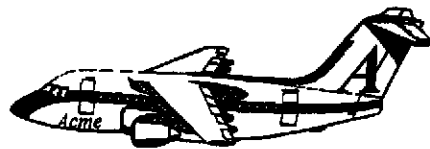
Acme Airlines' Quality Dilemma



Case 4

Case Analysis Instructions

- **Listen to the lecture on TQM**
 - ▼ focus on the tools used
- **Read the case**
- **Work with your group and complete the charts and questions required in the case.**
- **Be prepared to discuss the case and turn it in on the date on the syllabus!!**



**USING SOME OF THE SEVEN HELPFUL CHARTS
PART I**

Overview

Everyone in the services industry is talking about customer satisfaction and service quality. The commercial airlines understand this as well as anyone and focus their advertising on these issues. "We serve more cities", "We are number one in on-time flights", and "We don't lose your baggage" are just a few of the focal points of their promotional campaigns. But some of the airlines haven't gotten the message as quite as fast as some of the others. Your mission (if you choose to accept it) is to help one of those laggards - Acme Airlines join the growing ranks of quality focused carriers.

Acme Airlines

Acme Airlines started in 1968 as a small regional carrier flying between small and medium size airports and Hartsfield International in Atlanta. From 1968 to 1988 their revenues and profits rose steadily and they added service to Orlando and Nashville. However the last five years have not been as wonderful. Fewer passengers are flying Acme and profits are down. In fact, significant losses have been incurred the last two years. The president of the airline ordered a customer service survey to find out why previously loyal customers have defected to other airlines.

The key questions related to the customers' satisfaction/dissatisfaction with Acme's service level. Customers were asked to rate seven service factors on a 1 to 5 scale (1 = very satisfied through 5 = very dissatisfied) and rank them in order of importance (1 = least important to 7 = most important). The results are found in Table I.

SERVICE FACTOR	RATING OF SERVICE	RANKING OF IMPORTANCE	WEIGHTED RANKING
ON-TIME ARRIVAL	4.25	6	290
CREW FRIENDLINESS	1.75	2	140
PERCEIVED SAFETY	1.50	7	295
FOOD SERVICE	4.75	1	85
RESERVATIONS	2.00	3	140
BAGGAGE HANDLING	4.00	5	275
DESTINATIONS SERVED	1.75	4	145

RANKING OF IMPORTANCE = # OF PEOPLE THAT RANKED THE SERVICE FACTOR 7/6/5

WEIGHTED RANKING = NUMBER OF PEOPLE x RANKING for all ranking levels

1. What should the president of the airlines do with this data?

2. Using the following pages, create three Pareto Charts to help sort out this data.

3. Which chart or charts are most important in determining where to focus Acme's quality improvement efforts? (CHECK ONE)

___ CHART ONE ONLY

___ CHART TWO ONLY

___ CHART THREE ONLY

___ CHARTS ONE & TWO

___ CHARTS ONE & THREE

___ CHARTS ONE & THREE

___ ALL THREE CHARTS

4. What two service factors should the president focus quality improvement efforts on first? Hint: look at all three charts. (CHECK TWO)

___ ON-TIME ARRIVAL

___ CREW FRIENDLINESS

___ PERCEIVED SAFETY

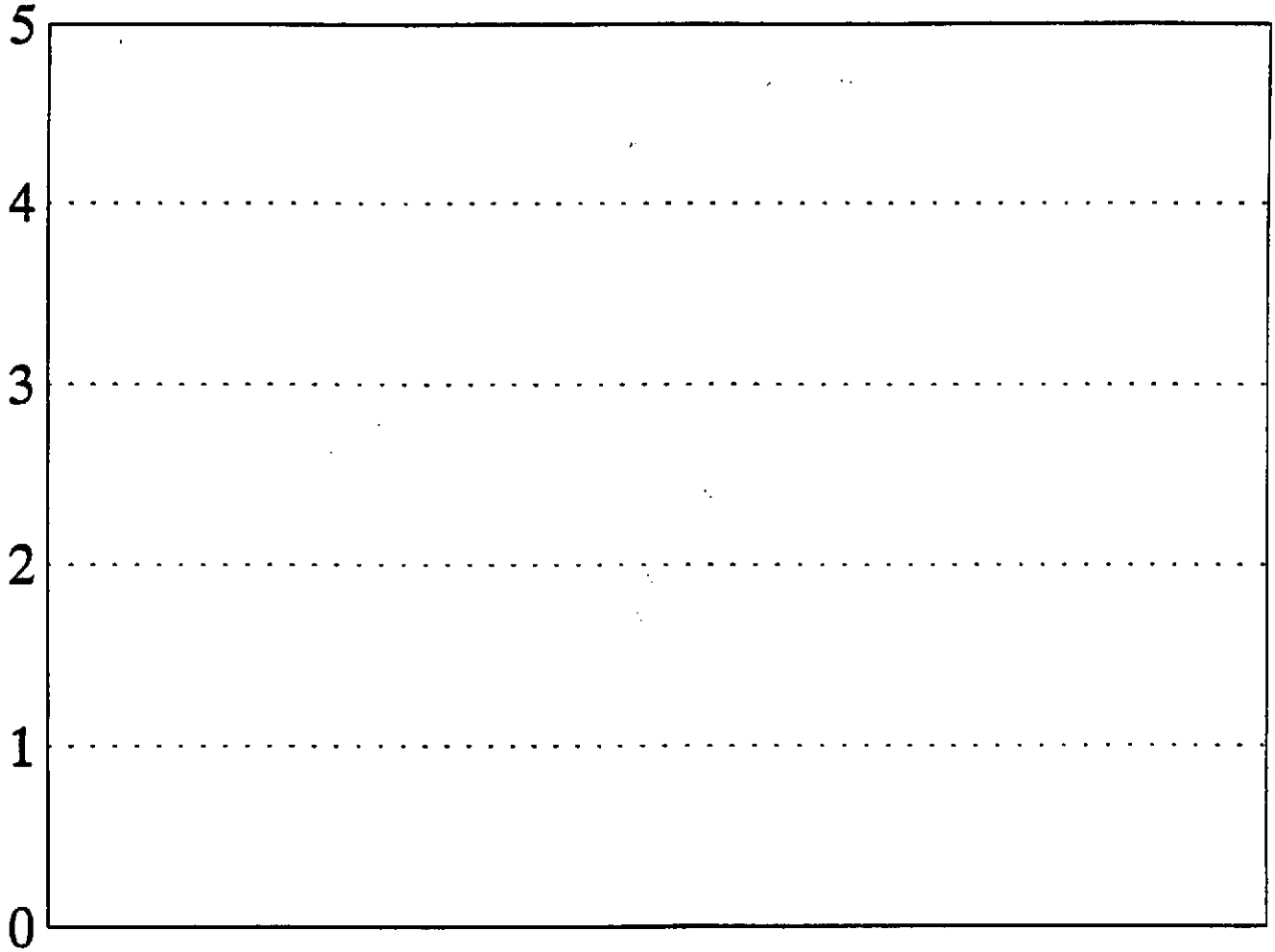
___ FOOD SERVICE

___ RESERVATIONS

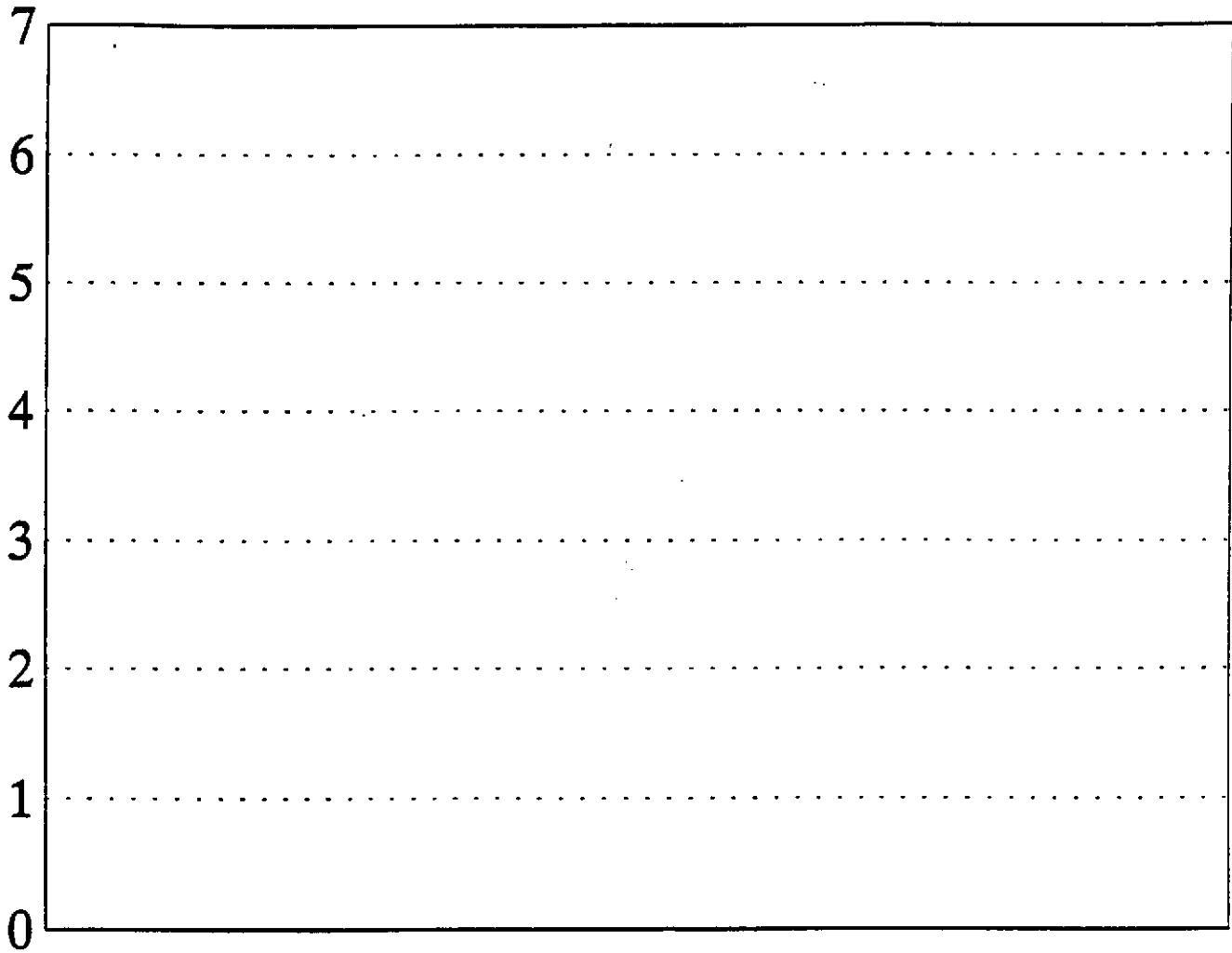
___ BAGGAGE HANDLING

___ DESTINATIONS SERVED

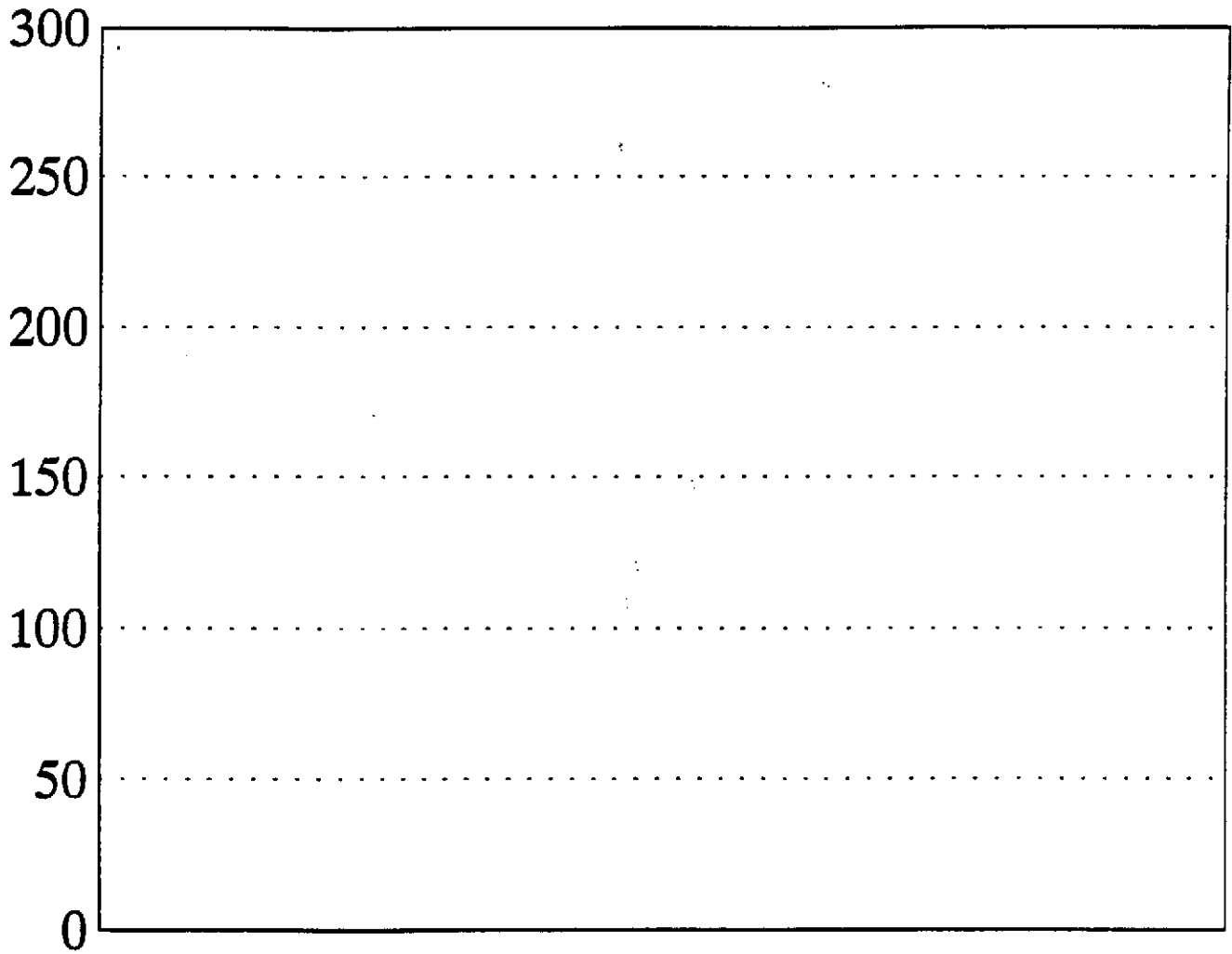
RATING OF SERVICE PARETO CHART



RANKING OF IMPORTANCE PARETO CHART



WEIGHTED RANKING PARETO CHART



**USING SOME OF THE SEVEN HELPFUL CHARTS
PART II**

The president has decided that on-time arrival is a primary issue that is driving away Acme's customers. The other current problem is lost or delayed baggage. The survey comments revealed that not only were flights regularly late but passengers also claimed that they had to wait for luggage for up to a half hour (if it arrived at all). The compounding nature of the problems led to passengers arriving at home or their final destination about an hour later than expected. The president knew that two or three missed meetings or connecting flights due to Acme created problems was all that it took to drive passengers to other airlines. Something had to be done!

The president held meetings with the contractors who provided ground service for Acme. He was convinced that the delayed and lost baggage problem could be settled through an upgrade of the ground equipment and baggage tagging systems. That left the problem of late flights. Since Acme had never kept consistent records concerning on-time arrival, the airline had to start at ground zero. Meetings were held with pilots, ticket agents, flight attendants, schedulers, and managers to determine what was causing the problem. Some of the comments heard repeatedly by the president included:

"We don't have enough planes to cover the times when a mechanical problem is discovered"

"We have too many equipment breakdowns"

"There always seems to be a crew member that is late for a flight"

"We don't have enough pilots to cover our schedule and stay within FAA rules"

"The weather can be a major problem"

"These airports are so overcrowded. We pull out of the gate on time but sit on the runway so long that we know we will arrive late"

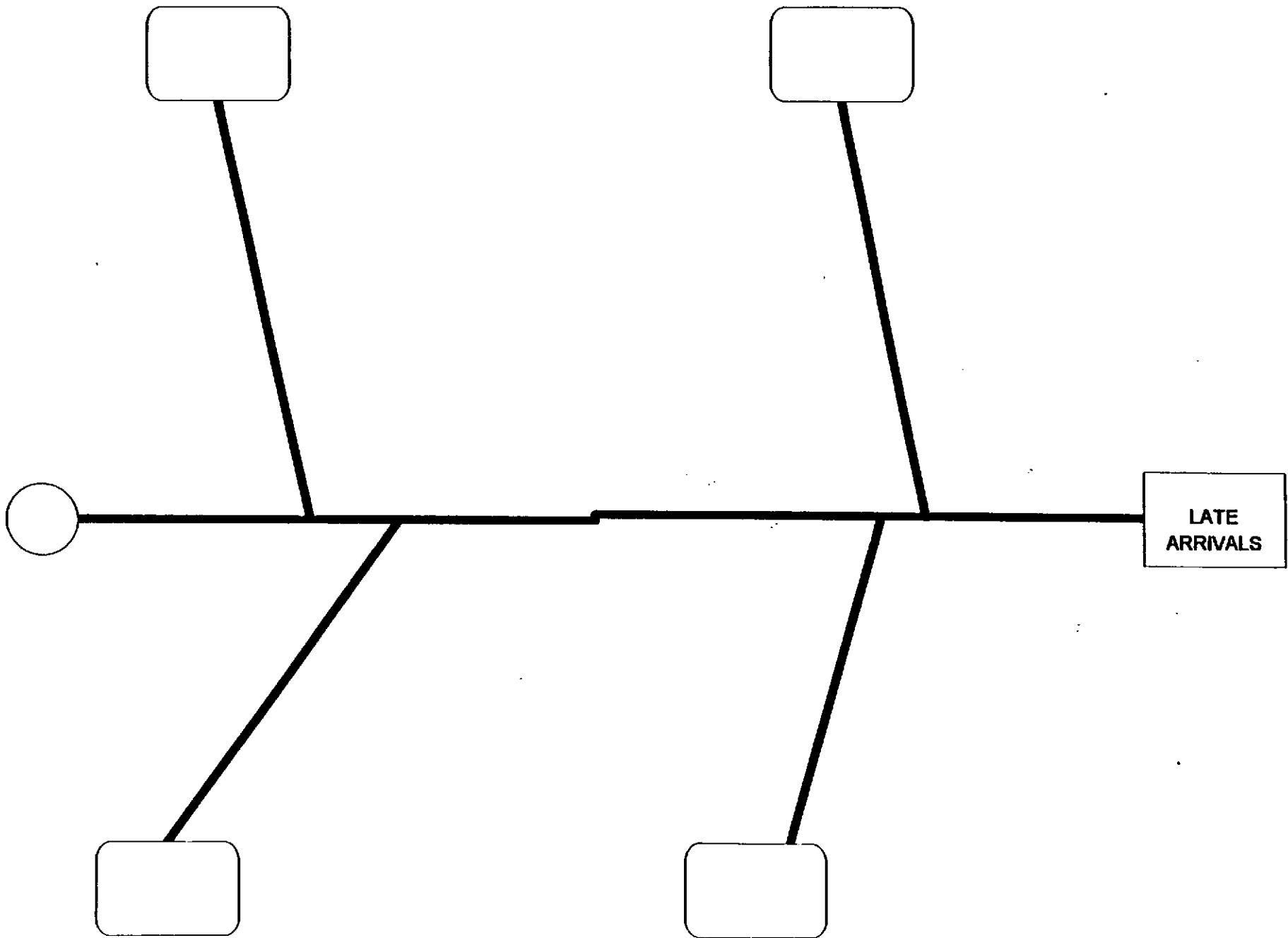
"Company policy on fuel consumption forces us to fly slower than is necessary to meet the scheduled arrival time"

"The ticket agents make us wait too long for passengers from connecting flights"

"The ground crew never gets the plane loaded on time"

"The scheduled arrival times are too tight. If you have any delay at all, there's no way to make it up"

The president was overwhelmed by these comments and didn't know what to do next! Give him some help by answering the questions on the following page.



**USING SOME OF THE SEVEN HELPFUL CHARTS
PART III**

The president decided that there were so many possible causes that some data should be collected before choosing what to work on. Information was compiled on every flight for a three month period and is listed in the following charts.

REASON DAY	SUN	MON	TUE	WED	THU	FRI	SAT
CREW LATE	2	5	2	1	4	5	8
WEATHER	2	4	1	3	2	5	3
EQPT. PROBLEM	5	8	5	4	3	9	5
SHORT STAFFED	4	20	5	0	4	18	3
AIRPORT DELAY	3	15	3	2	2	15	0
OTHER	1	2	1	3	1	4	2

REASON CITY	ATLANTA	ORLANDO	KNOXVILLE	CHARLOTTE
CREW LATE	5	12	6	4
WEATHER	5	3	7	5
EQPT. PROBLEM	14	15	6	4
SHORT STAFFED	9	9	17	19
AIRPORT DELAY	5	18	3	4
OTHER	3	4	3	5

1. IF THE PRESIDENT ASKED YOU WHAT PARETO CHARTS SHOULD BE BASED ON THIS DATA, WHAT WOULD FACTORS YOU RECOMMEND TO LOOK AT?

2. WITHOUT MAKING UP CHARTS, WHAT, WHEN AND WHERE DO YOU SEE THE MAJOR PROBLEMS WHICH CAUSE DELAYS?

THE PRESIDENT ALSO HAD DATA COLLECTED ON THE AMOUNT OF TIME THAT EACH OF THESE FLIGHTS WERE LATE. DATA ON THIS ISSUE IS PROVIDED BELOW:

MINUTES LATE	FREQUENCY	MINUTES LATE	FREQUENCY	MINUTES LATE	FREQUENCY
1	8	16	2	31	8
2	10	17	2	32	6
3	10	18	1	33	8
4	8	19	3	34	9
5	10	20	2	35	5
6	6	21	1	36	3
7	7	22	0	37	3
8	5	23	1	38	2
9	7	24	2	39	3
10	8	25	1	40	2
11	3	26	1	41	2
12	2	27	1	42	1
13	3	28	4	43	2
14	2	29	3	44	1
15	1	30	8	45+	6

3. USE THE CHART PROVIDED ON THE NEXT PAGE TO DEVELOP A HISTOGRAM OF THE AMOUNT OF TIME THE FLIGHTS WERE LATE.
4. WHAT DOES THE PATTERN OF THIS CHART REVEAL?
5. WHAT DO YOU SUGGEST THAT THE PRESIDENT TAKE AS THE NEXT STEP IN HIS INVESTIGATION OF LATE ARRIVALS?
6. BASED ON YOUR LIMITED ANALYSIS OF THE DATA WHERE SHOULD CORRECTIVE ACTIONS BE FOCUSED TO GAIN THE BIGGEST IMPROVEMENTS IN ON-TIME PERFORMANCE?

LATE ARRIVAL INFORMATION HISTOGRAM

