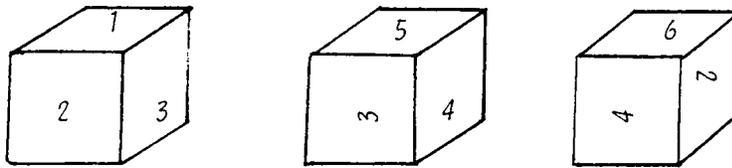


PROBLEM SHEET I

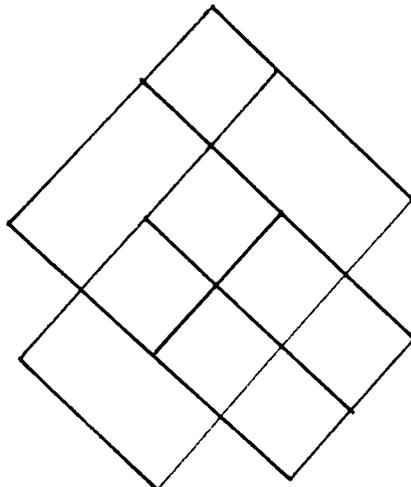
1. What is the sum of all the divisors of 12?
2. State the next three numbers in the sequence 1, 6, 16, 31, .....
3. Find the sum:  $1 + 3 + 5 + \dots + 95 + 97 + 99$ .

4.



These are three views of the same cube.

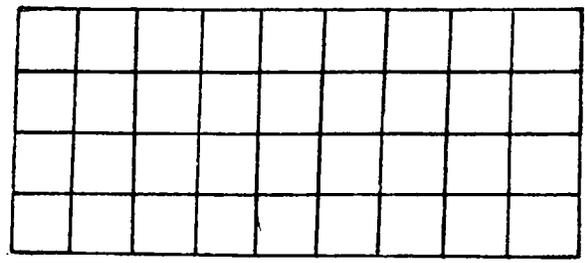
- a) Which side is opposite side 4?
  - b) Which side is opposite side 5?
  - c) Which side is opposite side 6?
5. At a party, three 8-slice pizzas are ordered by five students. If each student eats the same number of slices, what is the minimum number of slices that would be left over?
  6. How many squares are there in this figure?



PROBLEM SHEET 12

1. Find the largest whole number less than 1382 that is divisible by 9.
2. A woman bought some 40 cent stamps, ten times as many 20 cent stamps, and some dollar stamps that cost \$20.00 altogether. How many of each kind of stamp did the woman buy?

3. Using a piece of graph paper, show how to cut the rectangle into two pieces that will fit together to form a square.



4. Give the next three numbers in each of the following series:
  - a) 1, 4, 9, 16, \_\_, \_\_, \_\_.
  - b) 1, 8, 27, 64, \_\_, \_\_, \_\_.
  - c) 0, 7, 26, 63, \_\_, \_\_, \_\_.

5. What is the last digit in  $3^{25}$ ?

6. Art, Brian, Carl, and Don each went on a total of four dates with four different girls. The second time, Art dated Effie and Carl dated Francine. The third time, Brian dated Hattie and Don dated Georgia. The fourth time Carl dated Georgia and Don dated Francine. For each of the four times, tell which girl dated which boy.

HINT: Use the chart to solve the problem.

|       | 1 | 2 | 3 | 4 |
|-------|---|---|---|---|
| Art   |   |   |   |   |
| Brian |   |   |   |   |
| Carl  |   |   |   |   |
| Don   |   |   |   |   |