

Write the solutions for problems 1 – 3 *on this page*:

1. S16 is set of multiples of 16 less than 100. S12 is a set of multiples of 12 less than 100.

- List the elements of these sets using curly brackets { }
- Draw Venn diagram for S12 and S16.

S16 = \_\_\_\_\_

S12 = \_\_\_\_\_

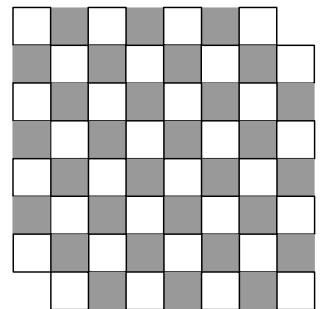
2. If it is 7am now, what time of the day will it be in ...

(a) ... 27 hours?

(b) ... 127 hours?

(c) ... 11043 hours?

3.\* If we take a usual chessboard and remove two diagonally opposite corner squares, is it possible to cut it into  $2 \times 1$  rectangles? **Explain!**



*[Hint: it is important that some squares are black, some are white].*

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Solve problems 4 – 7 **in your notebook**:

4. Use a RULER to draw a Cartesian X – Y plane. Plot a quadrilateral ABCD by points

A(3, -1)    B(3,3)    C(-1,3)    D(-1, -1)

5. Make an auxiliary **drawing** to construct an **equation** needed to solve a word problem:

Four friends, Pichu, Pikachu, Tepig, and Oshawott went trick or treating. Oshawott collected 50 more candies than Pichu, Pikachu 50 less, and Tepig got 2 times more candies than Pichu. When they got together and put all candies in one jar, the number was 250.

*How many candies each one collected?*

6. Divide with remainder:

a).  $825 : 9$

b).  $3761 : 13$

c).  $111,111,111,111 : 111$

7. How many vans are needed to take 32 students on a field trip if a van can take 6 students?

What is the maximal number of vans that can be fully occupied by these students?