MATH 5e: Class Work 13

Topics: Practice powers, base 4 systems, word problems …

P r o b l e m s

1. **Solve the equations**

   a) $-\frac{5}{7}x = -1\frac{1}{14}$

   b) $|x - 7| = 6$

   c) $3(3x - 1) = -2x + 8$

   d) $\frac{(4x-2)}{x} =$

Solve in groups

2. November 22, 2015, was a Sunday. In what month was the next Sunday that was also 22?

3. In the table, the numbers 1 to 36 are arranged in a square pattern 6 x 6. You have to select 6 numbers: **one in each row and one in each column**. What is the sum of your chosen numbers? Provide a logical explanation of the secret of this "magic" table.

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
31	32	33	34	35	36

4. Two brothers have a dog that has been in the family for many years. The dog adores each of the brothers equally. One day, the two brothers happened to be in two different villages 20 km apart – called Village A and Village B. On that day, the dog was with one of the brothers. The brothers started walking against each other at different speeds – one with 4 km/h and the other with 6 km/h. At the start, the dog ran towards the other brother fast, with a speed of 11 km/h, and at the moment he reached him, the dog turned and ran back towards the first brother, and so on the gog ran between the brothers until they met. What distance did the dog run?

MATH 5e: Class Work 13

Together (if time):

5. Add the base-4 numbers. Then, convert the numbers and the sum to base-10 numbers.

   $123 + 321 =$

6. Write the following numbers in a regular form – no powers.

   a) $3.14 \times 10^5 =$
   b) $2.15 \times 10^2 =$
   c) $2.15 \times 10^{-2} =$
   d) $6.4\ 10^{-5} =$

7. Write these large numbers in scientific notation ($abcd = a.bcd \times 10^3$)

   a) $2\ 019\ 000\ 000\ 000 =$
   b) $7\ 310\ 000$
   c) $3410 =$
   d) $0.00096 =$
   e) $0.051 =$
   f) $0.0033 =$