Math 4. Homework #15.

1. **Compute:**

   $35 + (-15) =$ $(-77) + 70 =$

   $112 - (-15) =$ $(-5) - (-5) =$

   $-7 - 13 =$ $(-74) - (-4) =$

2. **Compare:**

   a) -7 ☐ -10   b) -100 ☐ +1   c) -5 ☐ -2   d) -3 ☐ -13   e) 4 ☐ -4

3. **Remove parentheses and simplify:**

   a) $10x - (20y - 10x) - (y - x)(25 - 5) =$
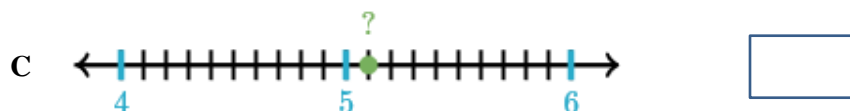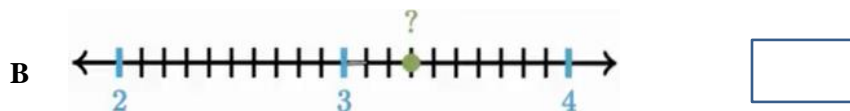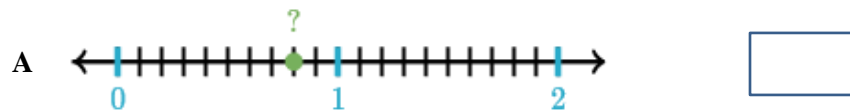
   b) $12 - (y + 2) =$ _____   c) $12 - (y - 2) =$ _____

4. A pipe pours 30 gallons of water into a swimming pool in an hour. Another pipe pours 50 gallons into the pool in an hour. How long will it take to fill up a 1200 gallons pool using both pipes?

5. **Solve equations:**

   a) $|3x - 4| = 5$ b) $|60 - x| = 40$

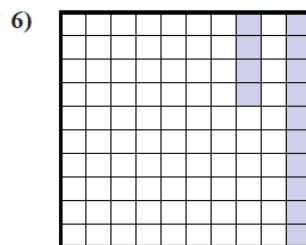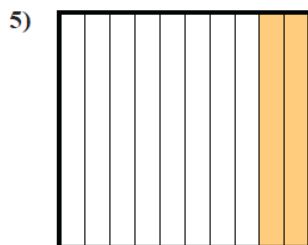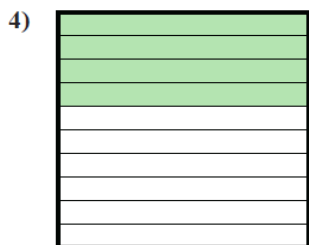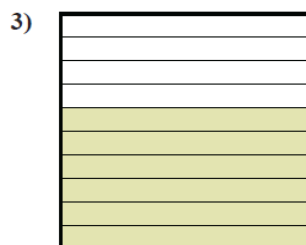**6.** Which decimal number corresponds to the point marked with a question mark?
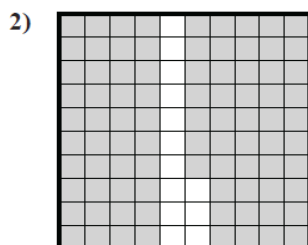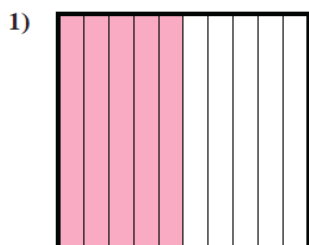
A

$$?$$

B

$$?$$

C

$$?$$

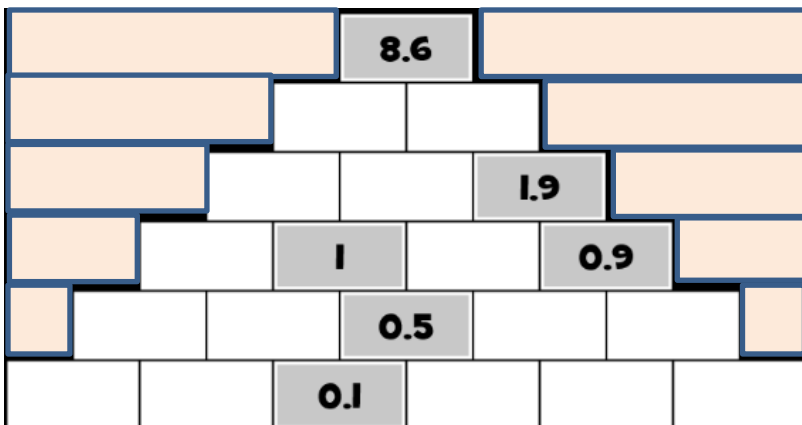

7. Compute:

a) $12.033 + 3.4 + 4.5 - 5.6 + 6.7 =$

b) $1.751 + 3.3 + 7.72 + 3.28 - 8.89 =$

8. Determine the fraction of the shaded area of the whole square. Write your answer in decimal numbers:

1)

2)

3)

4)

5)

6)

9. Complete the number puzzle using decimal numbers.

The number in each block is the sum of the two numbers directly underneath.

Top row: 8.6

Row: 1.9

Row: 1 , 0.9

Row: 0.5

Row: 0.1

10. Write in the box decimal numbers are represented in the expanded form

$$(4 \times 1{,}000) + (3 \times 100) + \left(6 \times \frac{1}{100}\right) + \left(7 \times \frac{1}{1000}\right)$$

$$(5 \times 1000) + (7 \times 10) + (8 \times 1) + \left(1 \times \frac{1}{10}\right) + \left(2 \times \frac{1}{100}\right)$$

11. The knight always tells the truth, the knave always lies. Two people, Red and Blue, stand before you. Red says, "We are both knaves." What are they really?

12. You are at an unmarked intersection ... one way is the City of Lies and another way is the City of Truth.

Citizens of the City of Lies always lie.

Citizens of the City of Truth always tell the truth.

A citizen of one of those cities (you don't know which) is at the intersection. What question could you ask to them to find the way to the City of Truth?