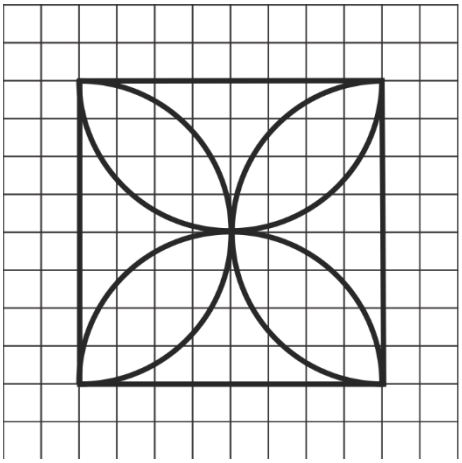
Math 5b, homework 21

1. Copy to your notebook:



2. Solve problems:
   a. Alex is 3 times older than Robert. How old is each boy if Alex is 8 years older than Robert?

   b. Sasha is 4 years older than Paul. In one year, their combined age will be 20 years. How old is each of them?

3. Evaluate. Which of the resulting fractions can be expressed as finite decimals?

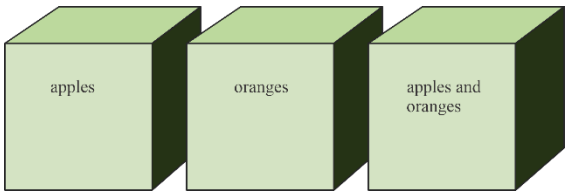
$\frac{5}{9}-\frac{7}{18}$; $\frac{4}{5}+\frac{3}{7}$; $\frac{2}{3}-\frac{5}{12}$; $\frac{12}{25}+\frac{8}{15}$;

$3+\frac{9}{16}$; $1-\frac{5}{8}$; $4-3\frac{5}{9}$; $9-2\frac{17}{20}$;

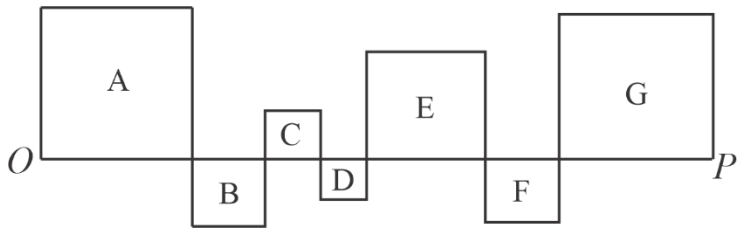
$1\frac{7}{8}+3\frac{5}{12}$; $2\frac{3}{14}-1\frac{5}{7}$; $\frac{2}{45}\cdot 9$; $\frac{48}{11}:6$;

$\frac{7}{12}\cdot\frac{6}{25}$; $\frac{18}{35}:\frac{16}{49}$; $2\frac{11}{20}\cdot 1\frac{1}{15}$; $10\frac{2}{7}:2\frac{25}{28}$;

4. One box contains apples, another contains oranges, and the third contains both apples and oranges. All boxes are labeled, but all labels are incorrect. You can take only one fruit from one box to determine the correct contents of each box. What will you do?"



5. A, B, C, D, E, F, and G are all squares. The length of the segment [OP] is 24 cm. What is the total perimeter of all squares?



6. Evaluate:

$a.\ \left(-\frac{1}{2}\right)^2 - \frac{1}{2};$ $b.\ \frac{1}{3} - \left(-\frac{1}{3}\right)^2;$ $c.\ \left(-\frac{1}{3}\right)^3 - \frac{1}{9};$ $d.\ \frac{1}{2} - \left(-\frac{1}{2}\right)^3$

7. A large box of candy is twice as expensive as a small one. Mary wants to buy 3 large boxes and 2 small ones, but if she buys 2 large boxes and 3 small ones, the purchase will be $15 cheaper. How much does each box of candy cost?