

Math 4a. Homework 15.



Problems marked with * are more difficult.

1. Evaluate the expression:

$$\frac{1\frac{3}{7} - \frac{1}{3} : 2.8 \cdot 3\frac{3}{5}}{\left(2.375 - \frac{1}{3} + 1\frac{1}{12}\right) \cdot 0.8};$$

Answer is 0.4, but you need to show your solution.

2. Find the equivalent statements among statements below:
- A is 40% of B.
 - A is 4 times smaller than B.
 - A is 25% of B.
 - A is 2 times smaller than B.
 - B is greater than A by 300%.
 - B is 2.5 times greater than A.
 - B is greater than A by 100%
 - A is smaller than B by 75%.
 - A is 50 % of B.
 - B is greater than A by 150%
3. 15% of the participant of math Olympiad solved 1 problem, 25% of the participant solved 2 problems, and the rest 24 students solved all three problems. How many students did participate in the math Olympiad?
4. How number A will change if
- First, number A was increase by 25%, then decrease by 40%?
 - First, number A was decrease by 60%, then increase by 80%?
5. The fourth grade is going on a school trip. Every student had to bring in \$64 for the trip to cover all costs. Unfortunately, 3 students could not participate on the trip. Therefore, every student who went on the trip had to bring in \$4 more so those who did not go could get their money back. How many students went on the trip?

6. a) To prepare 4 portion of seasoning you need $\frac{1}{3}$ teaspoon of salt, $\frac{1}{4}$ teaspoon of pepper and $\frac{1}{2}$ teaspoon of clove. How many teaspoons of salt, pepper, and cloves do you need to prepare 30 portions?

b) A pie recipe calls for 4 eggs, 1.5 cup of sugar, and $\frac{2}{3}$ cup of flour. How much sugar and flour do you need to prepare a dough using 9 eggs?

7. Solve the following equation:

a. $3x + 14 = 35$

c. $1.5x - 3 = 2$

b. $\frac{1}{2}x + 9 = 17$

d. $5 - 0.2z = 1$

8. Compute:

a. $42.18 \cdot 10 =$

f. $0.04 \div 10 =$

b. $0.0762 \cdot 100 =$

g. $0.24 \div 100 =$

c. $8.3 \cdot 100 =$

h. $12.18 \div 1000 =$

d. $0.0056 \cdot 1000 =$

i. $0.0001 \cdot 10000 =$

e. $72.13 \div 10 =$

9. Translate the rectangle corresponding to the blue arrow. Rotate the triangle around the point $L(0,0)$ according to the blue arrow. Write the new coordinates of the shapes.

