

Math 4e. Homework 17.



1. Mary, Peter, and Julia are going to do the spring cleanup in their garden. Mary can do the job in 4 hours, Peter can do the full clean up in 3 hours, Julia need 6 hours to do the job. How fast they will do it together?
2. A swimming pool can be filled by pump A in 3 hours and by pump B in 6 hours, each pump working on its own. At 9 am pump A is started. At what time will the swimming pool be filled if pump B is started at 10 am?

3. The older brother can clean up the room in 2 hours, the younger brother can completely ruin it in 3 hours. In how many hours will the room be cleaned if they are locked together in the messy room? (it's a math problem, the answer "they will play games" will not be accepted!)



4. A serving of fruit ice cream weighing 25 g contains 0.001 g of vitamin C. The daily requirement of the body for this vitamin is 0.075 g. Is it enough to eat 1 kg of ice cream per day to meet the body's daily vitamin C requirement?
5. Write the expression to solve the problem, then solve it for the given values of the variables.
Example: There are p textbooks in the first box. In the second box, there are 84 more textbooks than in the first. How many times more textbooks are there in the second box than in the first?
(Given: $p = 42$)

$$\frac{p + 84}{p} = \frac{42 + 84}{42} = 3$$

- a. There are s students in the fourth grade. In the fifth grade, there are 35 more students. How many students are there in both grades altogether? (Given: $s = 125$)
 - b. There are b cherry turnovers in the bakery shop and three times as many apple turnovers. How many fewer cherry turnovers are there than apple turnovers? (Given: $b = 15$)
6. Compare by representing fractions as decimals:

- | | | |
|-----------------------------|-----------------------------|------------------------------|
| a. $\frac{1}{2}$ and 0.55; | b. $\frac{3}{25}$ and 0.15; | c. $\frac{1}{8}$ and 0.12; |
| d. 0.75 and $\frac{3}{4}$; | e. $\frac{7}{20}$ and 0.35; | f. $\frac{1}{125}$ and 0.01; |

7. Compare by representing decimals as fractions:

a. $\frac{1}{6}$ and 0.2; b. $\frac{1}{3}$ and 0.3; c. $\frac{2}{3}$ and 0.75;

d. 0.1 and $\frac{1}{9}$; e. $\frac{5}{7}$ and 0.7; f. 0.8 and $\frac{5}{6}$;

8. Calculate mentally

a. $5 + 0.8$; $0.23 + 7$; $0.48 + 0.2$; $0.6 + 0.34$; $2.7 + 1.12$;

b. $0.76 - 0.3$; $2.54 - 2$; $0.82 - 0.02$; $0.63 - 0.6$; $0.8 - 0.25$;

c. $0.2 \cdot 4$; $2.1 \cdot 3$; $0.7 \cdot 10$; $0.5 \cdot 2$; $0.25 \cdot 4$;

d. $6:10$; $0.8:2$; $2.1:7$; $0.5:10$; $4.1:2$;

9. Fill in the digits in the cells of the 'number carpet' so that all the equalities are correct.

	:	2	-		=	
×		+		×		×
	+		-	4	=	5
:		-		+		-
4	+		-		=	
=		=		=		=
	-	3	+		=	8