

Name: (print) _____

Solutions.

Each problem is worth 2 points. Show all your work.

1. Calculate mentally and give a brief "teacher's solution":

$$(a) \begin{array}{r} 330 \\ 123 + 326 + 4 + 77 \\ \hline 200 \end{array}$$

$$200 + 330 = 530.$$

$$(b) 37 \times 4$$

$$= (30 + 7) \times 4$$

$$= 120 + 28 = 148.$$

$$(c) 197 + 568$$

$$= (197 + 3) + (568 - 3)$$

$$= 200 + 565$$

$$= 765$$

$$(c) 1575 \div 25$$

$$= (1000 + 500 + 75) \div 25$$

$$= 40 + 20 + 3 = 63$$

or

$$= 3150 \div 50 = 315 \div 5$$

$$= (300 + 15) \div 5 = 60 + 3 = 63.$$

2. Make up a word problem for the following operation:

partitive division of $91 \div 5$.

91 is not evenly divisible by 5, so not every formulation would make sense.

Here are a few that are OK:

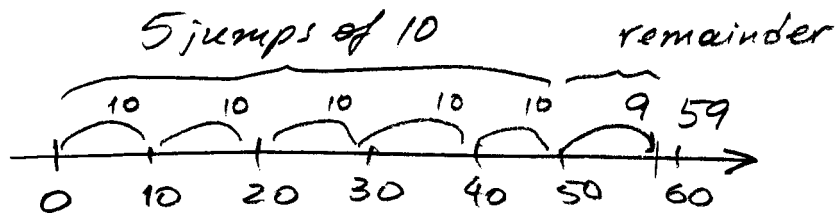
91 balloons are to be divided among 5 children so that each child gets an equal number of balloons. How many balloons will each child get? Will there be any balloons that are left over?

5 candy bars weigh 91 grams. How much does each candy bar weigh? Please turn over...

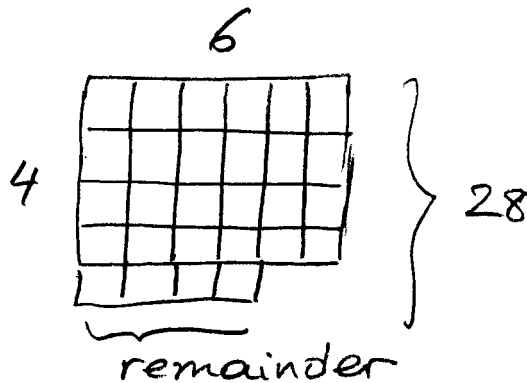
[problem is valid but the answer is a fraction.]

3. Illustrate the Quotient-Remainder Theorem:

(a) by a number line picture for $59 \div 10$

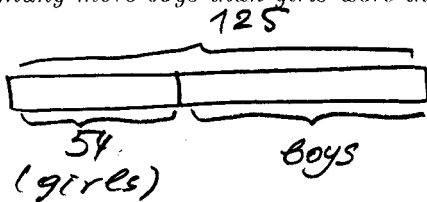


(b) by a rectangular array for $28 \div 6$.



$$28 = 4 \times 6 + 4$$

4. Give a "teacher's solution" to the problem using bar diagrams and step-by step instructions: 125 children took part in a mathematics competition. 54 of them were girls. How many more boys than girls were there?

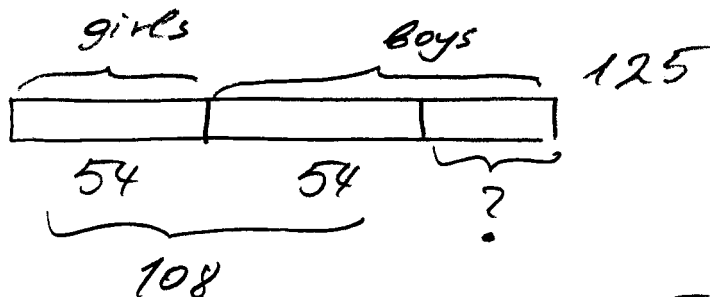


$$125 - 54 = 71 \text{ Boys}$$

$$71 - 54 = 17$$

Answer! There were 17 more boys.

OR:



$$125 - 108 = 25 - 8 = 17$$