

Mathematics, integers – test example

*It could be prepared by a teacher of your **favourite** subject...*

Read, think, solve - so easy! Please, let us know if you find a bag in GEZMAT... ;-)

1 (1) Problem – Number of pages

Piotr Nieżurawski, update: 2017-09-10, id: en-numbers-0000500, diff: 1

Wanda started reading a book at the beginning of page 16. After two hours she finished at the end of page 65.

- How many pages did she read?
- How many pages did she read on average in one hour?

Hint: If Wanda started reading at the beginning of page 1 and finished at the end of page 2, how many pages would she read?

Answer: Wanda read 50 pages, her average rate was 25 pages per hour.

2 (1) Problem – Plums

Piotr Nieżurawski, update: 2016-07-11, id: en-numbers-0001000, diff: 1

John had 30 plums. Then he ate one-third of them. How many plums has John now?

Hint: How much is 30:3? Answer: 10.

Answer: John has 20 plums.

3 (2) Problem – Apples

Piotr Nieżurawski, update: 2016-07-30, id: en-numbers-0002000, diff: 2

Mark had 32 apples. John took half of Mark's apples and added them to his own stock. Then it turned out that John has 3 times as many apples as Mark. How many apples do John and Mark have together?

Hint: How many apples are left in Mark's stock? Answer: 16.

Hint: How many apples does John have? Answer: 48.

Answer: John and Mark together have 64 apples.

4 (3) Problem – Pebbles

Piotr Nieżurawski, update: 2017-05-08, id: en-numbers-0003000, diff: 3

Daria and Nela collected some pebbles on the beach. If Daria gave Nela 6 pebbles, then each girl would have the same number of pebbles. However, if Nela gave Daria 8 pebbles, then Daria would have twice as many pebbles as Nela. How many pebbles did have each of the girls?

Hint: $D - 6 = N + 6$ and $D + 8 = 2(N - 8)$

Answer: Daria had 48 pebbles and Nela 36 pebbles.

5 (3) Problem – Sides of rectangles

Piotr Nieżurawski, update: 2016-07-30, id: en-rectangles-0001000, diff: 3

Calculate the length of:

- a) a side of the square with area 81 m^2 .
- b) a side of the rectangle with area 45 m^2 , and with the second side of length 9 m .
- c) a side of the square with perimeter equal to 20 m .
- d) a side of the rectangle with perimeter equal to 40 m , and with the second side of length 5 m .

Hint:

- a) $A = aa = a^2$
- b) $A = ab$
- c) $L = 4a$
- d) $L = 2(a + b)$

Answer:

- a) 9 m .
- b) 5 m .
- c) 5 m .
- d) 15 m .

6 (3) Problem – Cycling speed

Piotr Nieżurawski, update: 2016-07-30, id: en-speed-distance-time-0004000-dpc, diff: 3

Max went by bike from the starting line and rode at the average speed 3 m/s . Ann started from the same line 7 s after Max and she finished the race 14 s before Max. Both, Ann and Max, travelled the same distance. What was the Ann's average speed if the total time of her ride was equal to 21 s ?

Hint: How much time was Max biking? Answer: 42 s .

Hint: What was the length of the route? (Max...) Answer: 126 m .

Answer: Ann was cycling with speed 6 m/s .