Grades 8 (A), 9-12 (A) Duration: 15 min Tools: one 16 pcs Set / pair Individual / Pair work Keywords: Probability, Favourable outcome, Total outcome, Conditional probability	**615 - Pick three Blocks** **MATHS / PROBABILITY**	Erasmus+ **TEACHER** Logifaces 2019-1-HU01-KA201-0612722019-1

DESCRIPTION:

1. Students consider the probability of the following events if three random pieces are taken from the 16 pcs

Set without replacement:

a) the first piece is block 113.

b) the second piece is block 112, given that the first was block 113.

c) the third piece is block 111, given that the first was block 113, and the second was block 112.

2. The first piece is block 113, the second is block 112 and the third is block 111 if three random pieces are taken from the 16 pcs Set without replacement.

SOLUTIONS/EXAMPLES:

In the 16 pcs Set there are one block 113, one block 111 and two blocks 112.

1. a) The probability of picking block 113 is 1/16.

   b) The probability of picking block 112 given that the first was block 113, is 2/15.

   c) The probability of picking block 111 given that the first was block 113 and the second was block 112, is 1/14.

2. The required probability is the product of the probabilities calculated above: $\frac{1}{16} \times \frac{2}{15} \times \frac{1}{14} \approx 0.000595 \approx 0.06\%$

How many	1	1	2	1	1	2	1	3	2	2
Pieces										

PRIOR KNOWLEDGE

Conditional probability

RECOMMENDATIONS/COMMENTS:

Discuss the concept of conditional probability.