Name:

Date:
Tools: one 16 pcs Set

620 - Conditional Probability


MATHS / PROBABILITY

DESCRIPTION
Students put aside the repeated blocks of the 16 pcs Set and work with the remaining 10 blocks. They choose two blocks at random. They recall the definition of conditional probability, and answer the following questions:
a) What is the probability that one of the chosen blocks is 223 , given that the selected pair of blocks can be joined to form a regular prism of height 5 ?
b) What is the probability that one of the chosen blocks is 223 , given that the selected pair of blocks can be joined to form a regular prism of height 4 ? (See the diagram for a favourable outcome.)
c) What is the probability that one of the chosen blocks is 113 , given that the selected pair of blocks can be joined to form a regular prism of height 5?
d) What is the probability that one of the chosen blocks is 113 , given that the selected pair of blocks can be joined to form a regular prism of height 4 ?

They then consider the following "reverse" conditional probability questions, and discuss the difference between these and the previous questions.
e) What is the probability that the selected pair of blocks can be joined to form a regular prism of height 5 , given that one of the chosen blocks is 223 ?
f) What is the probability that the selected pair of blocks can be joined to form a regular prism of height 4 , given that one of the chosen blocks is 223 ?
g) What is the probability that the selected pair of blocks can be joined to form a regular prism of height 5 , given that one of the chosen blocks is 113 ?

h) What is the probability that the selected pair of blocks can be joined to form a prism of height 4 , given that one of the chosen blocks is 113 ?

