



Ministry of Education, Youth and Information

Primary Exit Profile (PEP 6)

March 2019

Performance Task – Mathematics

Time: 2 hours

PLACE LABEL HERE



Name of Student

Name of School

Name of Class

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A Play Area for School

General Instructions:

This task has 4 parts. Read the information in each part carefully. Complete the task outlined in Part 1 and answer the questions in Parts 2, 3 and 4.

Task

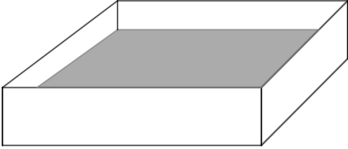
The principal of your school has decided to build a play area for the lower school students. She wants to include a sandbox. She has asked you to help her to make some decisions before she begins the construction. You will have to help her to:

- design the layout for the play area and sandbox
- calculate the amount of sand needed for the sandbox
- choose a hardware store from which to buy sand



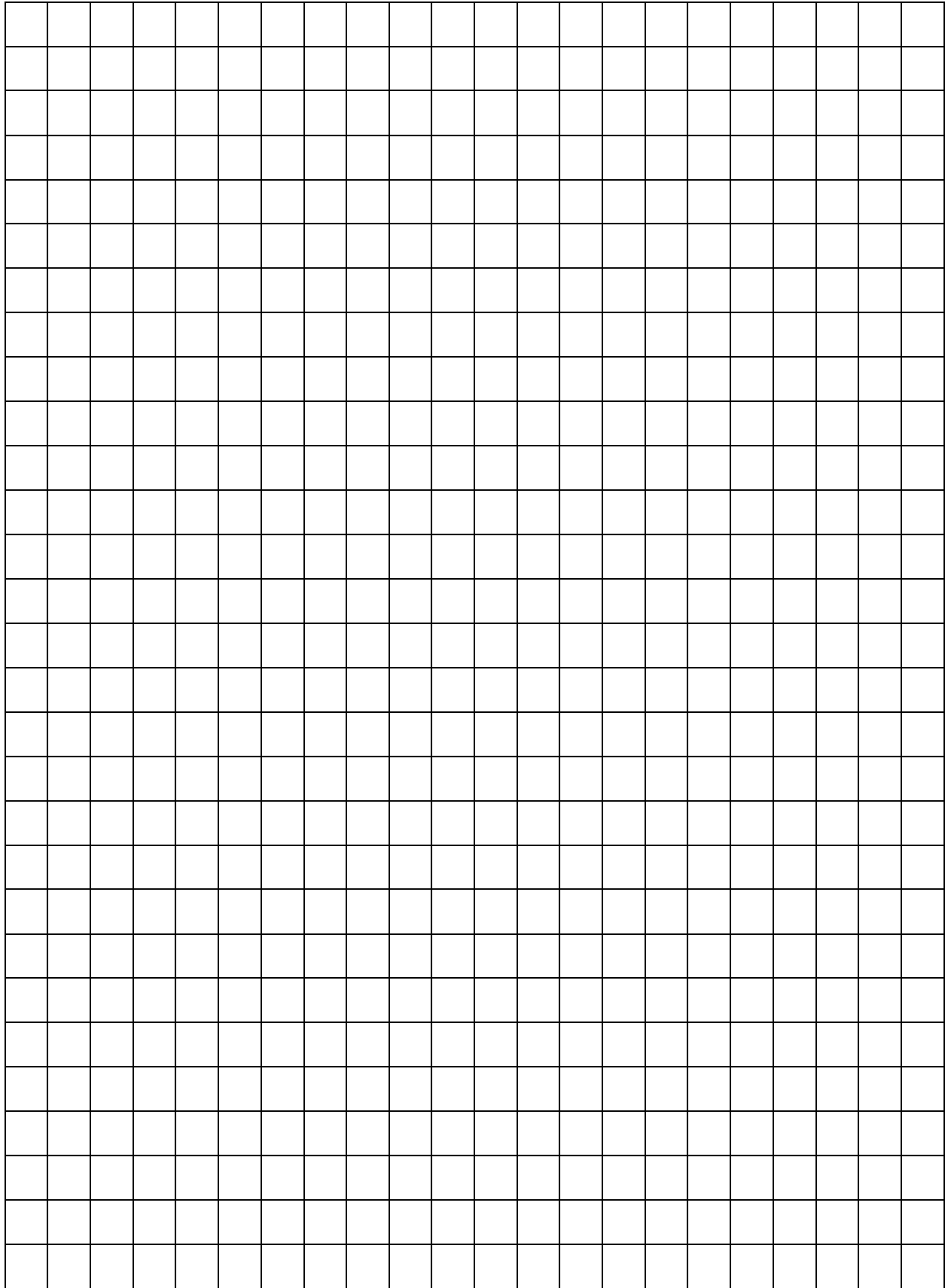
Part 1: Designing the Play Area

The principal has identified a section of the school yard for the play area. It has an area of 120 m^2 . She wants to build a rectangular sand box in the play area. The table below shows the space required for the sandbox.

Sand Box	Space Required (m^2)
	48

- A. Use the grid provided to draw the outline of the play area and the sandbox.
- B. Be sure to label the sections for the play area and the sand box. Be sure to include their measurements.

Each square on the grid represents 1 m^2 .



Part 2: Designing the Sand Box

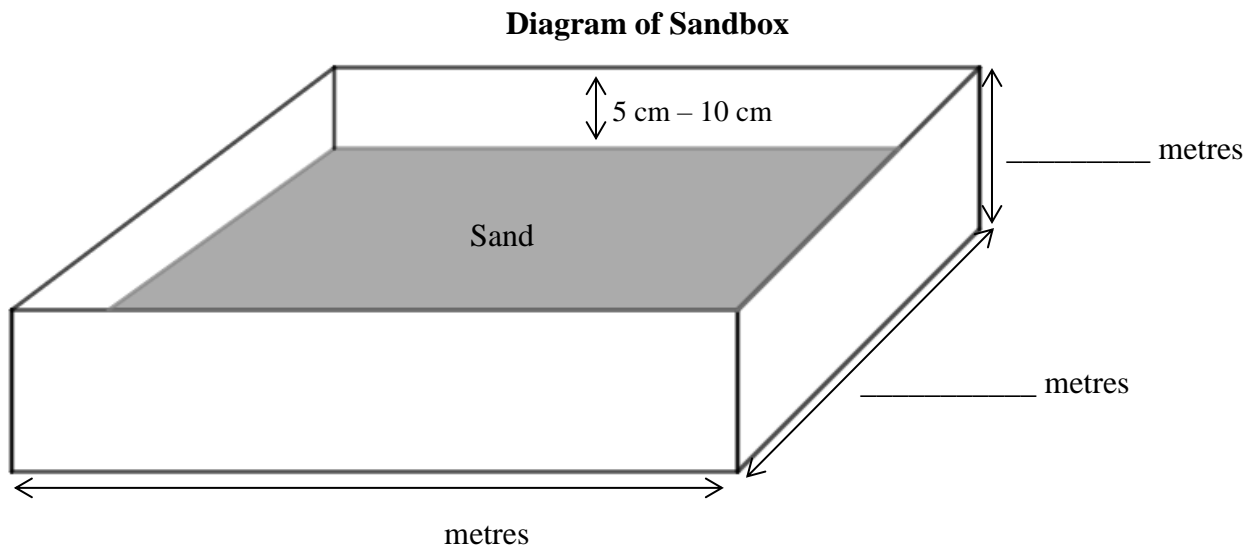
The principal wants to make sure that the students have enough sand to play in. Based on her research, she found out the following:

- The sand in the box should be 25 cm deep.
- The distance between the top of the sandbox and the top of the sand (as shown in the diagram below) should be between 5 cm and 10 cm.

A. What is the height of your sand box? _____ cm

B. What is the height of your sand box written in metres? Show your working.

C. Based on your design in Part 1 and the information in Part 2A and 2B above, fill in the missing measurements (in metres) on the diagram of the sandbox below.



Part 3: Getting Sand for the Sand Box

A. How much sand (in m^3) will be needed for the sand box? Show all your work.

B. A bag of sand contains 0.5 m^3 of sand. How many bags of sand will you need to buy for your sand box? Show all your work.

Part 4: Buying Sand for the Sand Box

There are two questions in this part: 4A and 4B.

Read each question carefully then choose ONE.

You are to do EITHER 4A OR 4B.

4A.

There are two hardware stores that sell sand by the bag. The principal needs to decide which store to buy the sand from. The price and delivery costs are given in the table below.

Item	Kumar's Hardware and Lumber	Construction One-Stop Hardware
Sand	\$400 per bag	\$500 per bag if less than 30 bags are purchased \$450 per bag if 30 or more bags are purchased
Delivery Cost	\$5000	\$3000

From which hardware should the principal buy the sand? Give reasons for your answer.

OR

4B.

There are two hardware stores that sell sand in cubic metres (m^3). The principal needs to decide which store to buy the sand from. The price and delivery costs are given in the table below.

Item	Bare Sand Hardware	Sand Galore Hardware
Sand	\$800 per m^3	\$1000 per m^3 if less than 15 m^3 of sand is purchased \$900 per m^3 if 15 m^3 or more of sand is purchased
Delivery Cost	\$5000	\$3000

From which hardware should the principal buy the sand? Give reasons for your answer.