HANDS ON EXPLORATION – PART 1

Dimensions

Choose 2 rectangular containers and 2 cylindrical containers. Using your ruler, determine the following:

RECTANGULAR CONTAINERS	CYLINDRICAL CONTAINERS
1. Container **A**: Measure the dimensions in cm: Length: ………………………………….. Breadth: ………………………………….. Height: …………………………………..	1. Container **A**: Measure the dimensions in mm: Radius: ………………………………….. Diameter: ………………………………….. Height: …………………………………..
2. Container **B**: Measure the dimensions in cm: Length: ………………………………….. Breadth: ………………………………….. Height: …………………………………..	2. Container **B**: Measure the dimensions in mm: Radius: ………………………………….. Diameter: ………………………………….. Height: …………………………………..
3. Which rectangular container is the deepest and by how much? ………………………………………………….. ………………………………………………….. …………………………………………………..	3. Which cylindrical container is the widest and by how much? ………………………………………………….. ………………………………………………….. …………………………………………………..

HANDS ON EXPLORATION – PART 2

Conversions

Using the same 2 rectangular & 2 cylindrical containers from Part 1, convert:

RECTANGULAR CONTAINERS	CYLINDRICAL CONTAINERS
4. Container **A**: Convert your measurements from Part 1 from cm to the following: Length: ……………….......…… cm = ……………….......……mm Breadth: ……………….......… cm = ……………….......……m Height: ……………….......… cm = ……………….......……km	4. Container **A**: Convert your measurements from Part 1 from mm to the following: Radius: ……………….......… mm = …………….......……cm Diameter: ……………….......… mm = …………….......……m Height: ……………….......… mm = …………….......……km
5. Container **B**: Convert your measurements from Part 1 from cm to the following: Length: ……………….......…… cm = ……………….......……mm Breadth: ……………….......… cm = ……………….......……m Height: ……………….......… cm = ……………….......……km	5. Container **B**: Convert your measurements from Part 1 from mm to the following: Radius: ……………….......… mm = …………….......……cm Diameter: ……………….......… mm = …………….......……m Height: ……………….......… mm = …………….......……km

Costing & Spread Rate

Using the same containers from Part 1 & 2, determine the following:

RECTANGULAR CONTAINERS	CYLINDRICAL CONTAINERS
6. If you put the smallest container into the larger container, determine the empty space between the two containers A and B in cm^3. **Volume = length × breadth × height**	6. Calculate the TSA (excluding the lid) in cm^2. **Formula of a cylindrical container with a closed lid = $(2 × \pi × radius^2) + (2 × \pi × radius × height)$**; *where π = 3,142* ....
7. If you had to fill the empty space between the two containers with oil, calculate the total cost of oil if it costs R65 per liter and is sold only in 2 liter bottles.	7. If you had to paint the container (excluding the lid), determine the cost of the paint if the paint is sold for R49,99 per 500 ml bottle and the spread rate of the paint is 800 cm^2/ℓ. ....