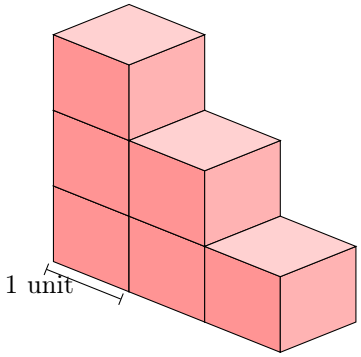
VOLUME

A DEFINITION

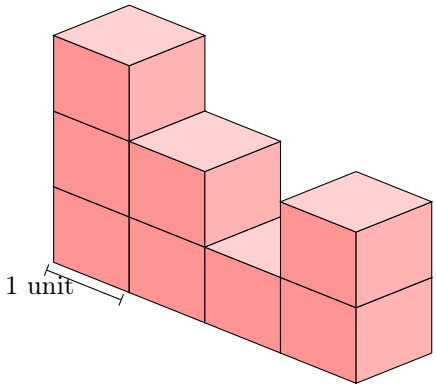
A.1 FINDING VOLUME OF A SHAPE

Ex 1: What is the volume of the red figure?



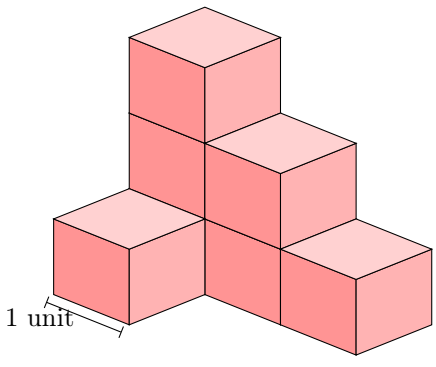
☐ cubic units

Ex 2: What is the volume of the red figure?



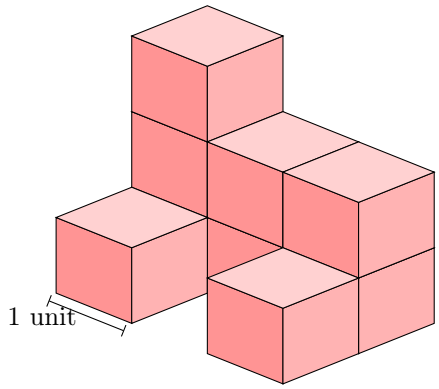
☐ cubic units

Ex 3: What is the volume of the red figure?



☐ cubic units

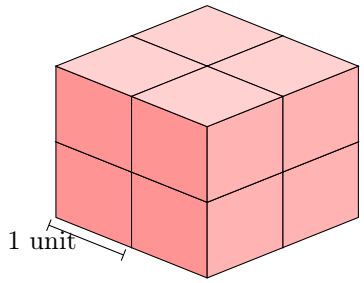
Ex 4: What is the volume of the red figure?



☐ cubic units

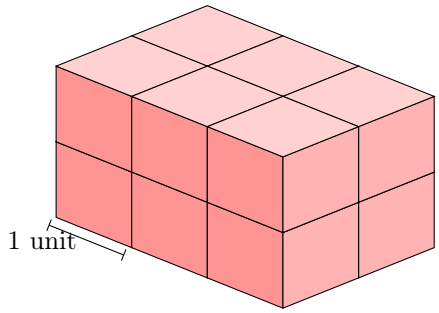
A.2 FINDING VOLUME OF A RECTANGULAR CUBOID

Ex 5: What is the volume of the red figure?



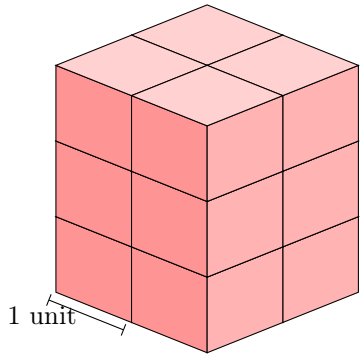
☐ cubic units

Ex 6: What is the volume of the red figure?



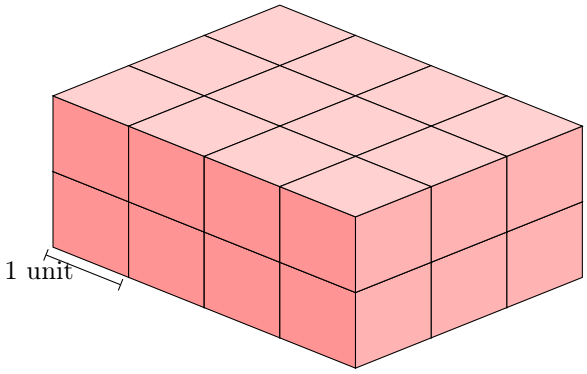
☐ cubic units

Ex 7: What is the volume of the red figure?



☐ cubic units

Ex 8: What is the volume of the red figure?



☐ cubic units

B UNITS OF VOLUME

B.1 CHOOSING UNITS FOR VOLUME

MCQ 9: What unit will be used to measure the volume of your bedroom?

Choose 1 answer:

☐ Cubic millimeters

☐ Cubic centimeters

☐ Cubic meters

MCQ 10: What unit will be used to measure the volume of a small toy block?

Choose 1 answer:

☐ Cubic millimeters

☐ Cubic centimeters

☐ Cubic meters

MCQ 11: What unit will be used to measure the volume of a grain of rice?

Choose 1 answer:

☐ Cubic millimeters

☐ Cubic centimeters

☐ Cubic meters

MCQ 12: What unit will be used to measure the volume of a bottle of milk?

Choose 1 answer:

☐ Cubic millimeters

☐ Cubic centimeters

☐ Cubic meters

MCQ 13: What unit will be used to measure the volume of a swimming pool?

Choose 1 answer:

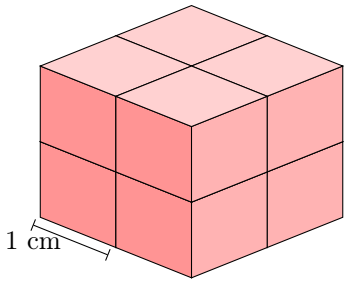
☐ Cubic millimeters

☐ Cubic centimeters

☐ Cubic meters

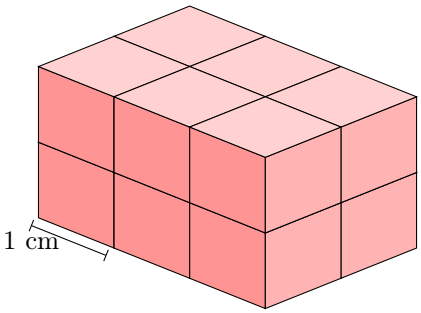
B.2 FINDING VOLUME OF A RECTANGULAR CUBOID

Ex 14: What is the volume of the red figure?



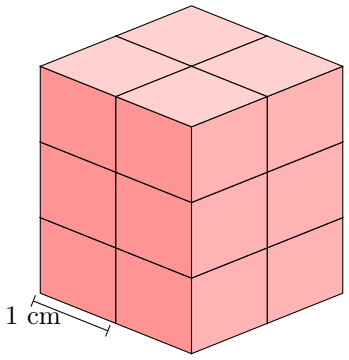
☐ cm^3
☐ m^3

Ex 15: What is the volume of the red figure?



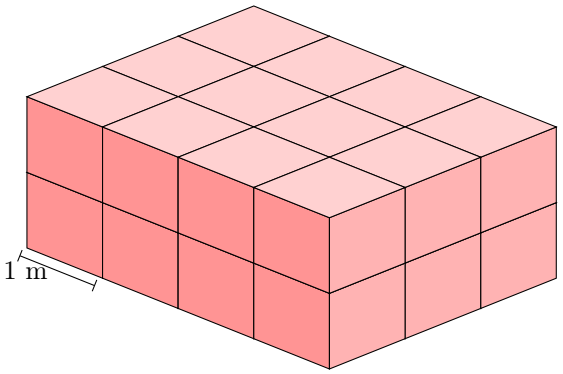
☐ cm^3
☐ m^3

Ex 16: What is the volume of the red figure?



☐ cm^3
☐ m^3

Ex 17: What is the volume of the red figure?



☐ cm^3
☐ m^3

C CONVERSION OF VOLUME UNITS

C.1 CONVERTING VOLUME UNITS

Ex 18: Convert:

$3\,\text{cm}^3 = \square\ \text{mm}^3$.

Ex 19: Convert:

$12\,000\,\text{mm}^3 = \square\ \text{cm}^3$.

Ex 20: Convert:

$4\,\text{m}^3 = \square\ \text{cm}^3$.

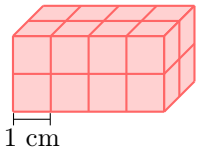
Ex 21: Convert:

$15\,000\,000\,\text{cm}^3 = \square\ \text{m}^3$.

D VOLUME OF A RECTANGULAR CUBOID

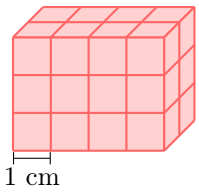
D.1 FINDING VOLUMES OF A RECTANGULAR CUBOIDS

Ex 22: What is the volume of the red figure?



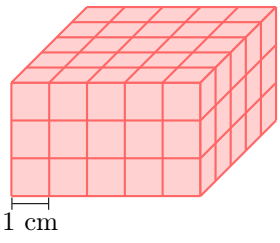
$\square\ \text{cm}^3$

Ex 23: What is the volume of the red figure?



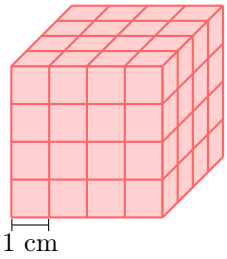
$\square\ \text{cm}^3$

Ex 24: What is the volume of the red figure?



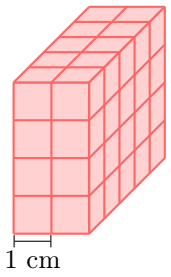
$\square\ \text{cm}^3$

Ex 25: What is the volume of the red figure?



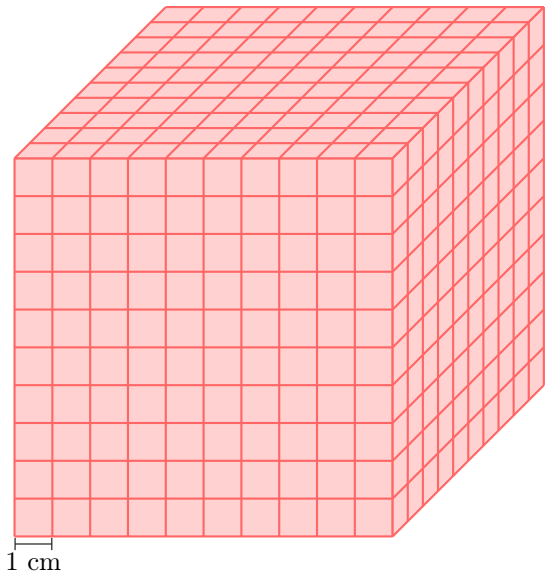
$\square\ \text{cm}^3$

Ex 26: What is the volume of the red figure?



$\square\ \text{cm}^3$

Ex 27: What is the volume of the red figure?



$\square\ \text{cm}^3$

D.2 SOLVING PROBLEMS

Ex 28: A rectangular swimming pool is 8 m long, 5 m wide, and 2 m deep. The water costs 10 dollars per cubic meter.
What is the volume of the swimming pool?

$\square\ \text{m}^3$

What is the cost to fill the swimming pool with water?

$\square$ dollars

Ex 29: A container has a volume of $20\,m^3$. A box is $2\,m$ long, $1\,m$ wide, and $0.5\,m$ high.
What is the volume of the box?

$\square$ m^3

How many boxes can fit inside the container?

$\square$ boxes

Ex 30: A storage room has a volume of $150\,m^3$. A water tank is $5\,m$ long, $2\,m$ wide, and $3\,m$ high.
What is the volume of the water tank?

$\square$ m^3

How many water tanks can fit inside the storage room?

$\square$ water tanks

Ex 31: A rectangular fish tank is $2\,m$ long, $1\,m$ wide, and $1\,m$ deep. The water costs 15 dollars per cubic meter.
What is the volume of the fish tank?

$\square$ m^3

What is the cost to fill the fish tank with water?

$\square$ dollars

E CAPACITY

E.1 CHOOSING UNITS FOR CAPACITY

MCQ 32: What unit best measures the capacity of a bathtub?
Choose 1 answer:

☐ 220 mL

☐ 2 200 mL

☐ 220 L

MCQ 33: What unit best measures the capacity of a dosage of medicine?
Choose 1 answer:

☐ 5 mL

☐ 0.5 L

☐ 5 L

MCQ 34: What unit best measures the capacity of a wine glass?
Choose 1 answer:

☐ 150 L

☐ 15 cL

☐ 1.5 L

MCQ 35: What unit best measures the capacity of a soup bowl?
Choose 1 answer:

☐ 40 cL

☐ 40 mL

☐ 40 L

MCQ 36: What unit best measures the capacity of a car's fuel tank?
Choose 1 answer:

☐ 60 mL

☐ 60 L

☐ 600 L

MCQ 37: What unit best measures the capacity of a pitcher?
Choose 1 answer:

☐ 2.5 mL

☐ 2.5 L

☐ 25 L

E.2 CONVERTING CAPACITY UNITS

Ex 38: Convert:

$3\,L = \square$ cL.

Ex 39: Convert:

$1.5\,L = \square$ cL.

Ex 40: Convert:

$20\,cL = \square$ L.

Ex 41: Convert:

$250\,cL = \square$ L.

Ex 42: Convert:

$2\,L = \square$ mL.

Ex 43: Convert:

$30\,mL = \square$ cL.

E.3 CONVERTING BETWEEN METRIC VOLUME AND CAPACITY UNITS

Ex 44: Convert:

$5\,m^3 = \square$ L.

Ex 45: Convert:

$500\,L = \square$ m^3.

Ex 46: Convert:

$3.4\,m^3 = \square$ L.

Ex 47: Convert:

$2\,L = \square$ m^3.