Steady Steps Maths

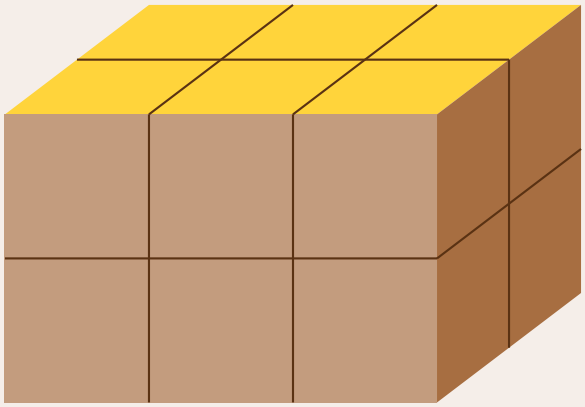
FREE SAMPLE WORKSHEET · TOPIC 9

FREE SAMPLE

Volume

Free sample worksheet · with answers

GRADE 5



12 cubic units

Common Core 5.MD.C.3–5

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Quick recap

The big idea from each pack in this topic. Read it first, then try the questions.

Learn it · Pack 1 · Understanding volume

Volume is the number of unit cubes that fill a solid.

4 layers of 6 cubes = 24 cubic units.

Learn it · Pack 2 · Volume formulas

V = l × w × h, or V = b × h (base area × height).

5 cm × 3 cm × 2 cm = **30 cm³**

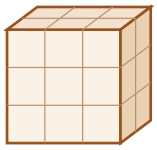
Learn it · Pack 3 · Composite volume

Split the solid into boxes, find each volume, then add.

24 cm³ + 10 cm³ = **34 cm³**

PACK 1 Understanding Volume

1 How many unit cubes make this box?



Answer

2 A box has 5 layers of 8 cubes. What is its volume?

Answer

3 Better unit for the volume of a classroom: cm³ or m³?

Answer

4 Which holds more: a box of 4 × 2 × 3 cubes or one of 5 × 2 × 2 cubes?

Answer

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5 How many 1 cm cubes fill a box 5 cm by 2 cm by 2 cm?

Answer

6 A cube has edges of 2 cm. What is its volume?

Answer

PACK 2 Volume Formulas

7 Find the volume of a box 6 cm by 4 cm by 3 cm.

Answer

8 A prism has base area 14 cm² and height 5 cm. Find its volume.

Answer

9 A box has volume 84 cm³, length 7 cm and width 4 cm. How tall is it?

Answer

10 A cube has edges of 6 cm. Find its volume.

Answer

11 A raised garden bed is 3 m long, 2 m wide and 1 m deep. How much soil fills it?

Answer

12 A box is 10 cm by 5 cm by 4 cm. What is its volume?

Answer

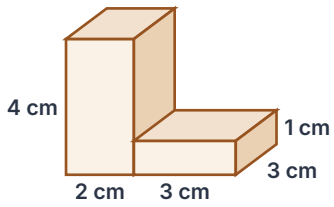
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PACK 3

Composite Volume

13 Find the total volume.



Answer

14 Two boxes: 4 × 2 × 2 cm and 3 × 2 × 1 cm. Find the total volume.

Answer

15 A storage shed is two boxes: 5 × 2 × 2 m and 2 × 2 × 3 m. Total volume?

Answer

16 An L-shaped solid is a 3 × 3 × 2 cm box joined to a 2 × 3 × 1 cm box. Total volume?

Answer

Real life

Read carefully, then show your working

17 A fish tank is 50 cm long, 20 cm wide and 30 cm high.
(a) What is its volume? (b) It is filled to a height of 25 cm. What volume of water is in it?

Answer

18 A step block is a 4 m × 2 m × 1 m box with a 2 m × 2 m × 1 m box on top.
(a) Find the volume of each box. (b) Find the total volume.

Answer

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Answer key

For parents · check the steps as well as the final answer

Pack 1	**1)** 18 **2)** 40 cubic units **3)** m^3 **4)** 4 × 2 × 3 (24 cubes) **5)** 20 **6)** 8 cm^3
Pack 2	**7)** 72 cm^3 **8)** 70 cm^3 **9)** 3 cm **10)** 216 cm^3 **11)** 6 m^3 **12)** 200 cm^3
Pack 3	**13)** 33 cm^3 **14)** 22 cm^3 **15)** 32 m^3 **16)** 24 cm^3
Real life	**17)** (a) 30,000 cm^3 (b) 25,000 cm^3 **18)** (a) 8 m^3 and 4 m^3 (b) 12 m^3

Tip: Always write cubic units: cm^3 or m^3.

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Enjoyed this sample?

This sheet has 18 questions. The full topic has 114, plus 10 unit tests.

Everything a Grade 5 student needs on volume: unit cubes and cubic units, counting layers, the formulas V = l × w × h and V = b × h, finding a missing edge, and the volume of solids made of two boxes.

What you get	What's inside	Questions
Pack 1 · Understanding Volume	Learn-it boxes, worked examples, practice, word problems, self-check and answer key · Common Core 5.MD.C.3, 5.MD.C.4	37
Pack 2 · Volume Formulas	Learn-it boxes, worked examples, practice, word problems, self-check and answer key · Common Core 5.MD.C.5a–b	40
Pack 3 · Composite Volume	Learn-it boxes, worked examples, practice, word problems, self-check and answer key · Common Core 5.MD.C.5c	37
Complete Topic book	All 3 packs in one book with a contents page	114
10 Unit Tests (A–J)	40 marks each, about 40 minutes, with a mark scheme and a "what to revise" table. **Test A is free.**	18 per test

How to use this sample

1. Let your child read the recap page and try the questions on their own.
2. Mark together with the answer key. Each section shows which pack it comes from.
3. If a section felt hard, that pack is the place to start. If it all felt easy, try the free Unit Test A.

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