



Calculate Volume and Capacity

I can solve problems involving calculation of volume and capacity.



1. It is recommended that nine-year-olds should drink 2 litres of water a day. Here is what Zac drank on Sunday. The chart has been completed for you:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached target? (Yes or No)	Extra needed to drink
500ml	250ml	500ml	500ml	1.75l	No	250ml

- a) Here is what Adriel drank on Saturday. Complete the chart:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached recommended target? (Yes or No)	Extra needed to drink
400ml	300ml	700ml	500ml			

- b) Here is what Rahul drank on Wednesday. Complete the chart:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached recommended target? (Yes or No)	Extra needed to drink
250ml	750ml	500ml	800ml			

- c) Here is what Trixie drank on Monday. The chart has been completed for you:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached recommended target? (Yes or No)	Extra needed to drink
350ml	350ml	500ml	400ml			

- d) Who was closer to reaching the target of 2 litres – Trixie or Adriel? _____



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2. At a cafe, they sell drinks in small and large glasses. A small glass holds 200ml of drink and a large glass holds 400ml.

a) How many small drinks could be sold from a 2-litre bottle of drink?

Show your working out.

Answer:

b) How many large drinks could be sold from a 2-litre bottle of drink?

Show your working out.

Answer:

Calculate Volume and Capacity Answers

1. It is recommended that nine-year-olds should drink 2 litres of water a day.

a) Here is what Adriel drank on Saturday. Complete the chart:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached recommended target? (Yes or No)	Extra needed to drink
400ml	300ml	700ml	500ml	1.9l	No	100ml

b) Here is what Rahul drank on Wednesday. Complete the chart:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached recommended target? (Yes or No)	Extra needed to drink
250ml	750ml	500ml	800ml	2.3l	Yes	N/A

c) Here is what Trixie drank on Monday. The chart has been completed for you:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached recommended target? (Yes or No)	Extra needed to drink
350ml	350ml	500ml	400ml	1.6l	No	400ml

d) Who was closer to reaching the target of 2 litres – Trixie or Adriel? **Adriel**

2. At a cafe, they sell drinks in small and large glasses. A small glass holds 200ml of drink and a large glass holds 400ml.

a) **10 glasses**

b) **5 glasses**

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1. It is recommended that nine-year-olds should drink 2 litres of water a day.
Here is what Maia drank on Thursday. The chart has been completed for you:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached target? (Yes or No)	Extra needed to drink
600ml	150ml	400ml	350ml	1.5l	No	500ml

- a) Here is what Ali drank on Friday. Complete the chart:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached recommended target? (Yes or No)	Extra needed to drink
800ml	350ml	650ml	700ml			

- b) Here is what Rahul drank on Sunday. Complete the chart:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached recommended target? (Yes or No)	Extra needed to drink
450ml	650ml	500ml	150ml			

- c) Here is what Trixie drank on Monday. The chart has been completed for you:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached recommended target? (Yes or No)	Extra needed to drink
250ml	450ml	400ml	550ml			

- d) Which child came closest to drinking 2 litres of water – Trixie, Rahul or Ali? _____

Explain how you know.



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2. There are 8 bottles of milk in a crate. Each bottle holds 250ml of milk.

a) What is the volume of milk in a whole crate? Write your answer in litres (l).

Show your working out.

Answer:

b) The milkman delivered 15l of milk one morning. How many crates did he need to hold all the milk? Not every crate will be full.

Show your working out.

Answer:



Calculate Volume and Capacity Answers

1. It is recommended that nine-year-olds should drink 2 litres of water a day.

a) Here is what Ali drank on Friday. Complete the chart:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached recommended target? (Yes or No)	Extra needed to drink
800ml	350ml	650ml	700ml	2.5l	Yes	N/A

b) Here is what Rahul drank on Sunday. Complete the chart:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached recommended target? (Yes or No)	Extra needed to drink
450ml	650ml	500ml	150ml	1.75l	No	250ml

c) Here is what Trixie drank on Monday. The chart has been completed for you:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached recommended target? (Yes or No)	Extra needed to drink
250ml	450ml	400ml	550ml	1.65l	No	350ml

d) Which child came closest to drinking 2 litres of water – Trixie, Rahul or Ali? **Rahul**

Explain how you know.

Children's own responses, such as: *I used subtraction to find the difference between 2 litres and how much each child drank. There was only a difference of 250ml between how much Rahul drank and the target of 2 litres so he came closest to the target.*

2. a) **2 crates**

b) **8 crates**

Calculate Volume and Capacity

I can solve problems involving calculation of volume and capacity.

1. It is recommended that adult men should drink 3 litres of water a day.

Here is what Jeff drank on Tuesday. The chart has been completed for you:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached target? (Yes or No)	Extra needed to drink
650ml	550ml	500ml	400ml	2.1l	No	900ml

a) Here is what Saif drank on Saturday. Complete the chart:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached recommended target? (Yes or No)	Extra needed to drink
700ml	450ml	650ml	500ml			

b) Here is what Ralph drank on Tuesday. Complete the chart:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached recommended target? (Yes or No)	Extra needed to drink
1l	650ml	700ml	750ml			

c) Here is what Luke drank on Saturday. He drank the same amount from midday to 3:30pm as he drank from 3:30 p.m. to 7 p.m. Use this information to complete the chart:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached recommended target? (Yes or No)	Extra needed to drink
950ml			700ml	2.95l	No	

d) How much more water would Saif need to drink to reach the same amount as Luke? Give your answer in millilitres (ml).

Show your working out.

Answer:



Calculate Volume and Capacity

2. Each jug holds 800ml of juice. At a party, 9 glasses were poured out, each glass with a capacity of 300ml. How many jugs were needed to make sure there was enough juice?
Show your working out.

Answer:

3. Louisa and Jana are holding a party. 8 guests are coming. Cola comes in bottles of 1 litre, and each person's glass can hold 350ml.
They want to give each guest 2 drinks each.
Louisa thinks that they will need 5 bottles of drink, but Jana says they will need 6. Who do you think is correct and why?
Show your working out.

Answer:

I think that _____ is correct because _____



Calculate Volume and Capacity Answers

1. It is recommended that adult men should drink 3 litres of water a day.

a) Here is what Saif drank on Saturday. Complete the chart:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached recommended target? (Yes or No)	Extra needed to drink
700ml	450ml	650ml	500ml	2.3l	No	700ml

b) Here is what Ralph drank on Tuesday. Complete the chart:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached recommended target? (Yes or No)	Extra needed to drink
1l	650ml	700ml	750ml	3.1l	Yes	none

c) Here is what Luke drank on Saturday. He drank the same amount from midday to 3:30pm as he drank from 3:30 p.m. to 7 p.m. Use this information to complete the chart:

Up to midday	Midday to 3:30 p.m.	3:30 p.m. to 7 p.m.	7 p.m. to bedtime	Total (in litres)	Reached recommended target? (Yes or No)	Extra needed to drink
950ml	650ml	650ml	700ml	2.95l	No	50ml

d) **650ml or 0.65l**

2. **4 jugs**

3. Jana is correct. Children's explanations should show working out that recognises the need to round up:

$$\text{Amount needed} = 8 \times 350 = 2800\text{ml}$$

$$\text{Each guest has 2 drinks} = 2800 \times 2 = 5600\text{ml} = 5.6\text{l}$$

$$5 \text{ bottles} = 5\text{l}$$

$$6 \text{ bottles} = 6\text{l}$$

You would need 6 bottles of cola as 5 bottles are not enough.