



Name _____ Class _____ Date _____

Archimedes has a pool in his garden. It has been raining all day and the pool is full to the brim. The rectangular pool measures 4 m long and 2.5 m wide. It is 3.75 m deep in all areas of the pool because Archimedes once dived in the shallow end and created a huge hole! Since then it has been leveled out to 3.75 m.

1. What is the total capacity of the pool?

Volume, Capacity and Mass are related. Look at the table below:

Capacity (milliliters)	Volume (cubic centimeters)	Mass (grams)
1 mL	1 cm ³	1 g
10 mL	10 cm ³	10 g
100 mL	100 cm ³	100 g
200 mL	200 cm ³	200 g
500 mL	500 cm ³	500 g
1 L	1000 cm ³	1 kg



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3. How much chlorine does Archimedes need for one year?

4. Which offer should Archimedes take if he puts the same amount of chlorine in his pool all year round?

5. Will he have any chlorine left over?

Challenge:

If three hours ago it was as long after one o'clock in the morning as it was before one o'clock in the afternoon, what time would it be now?



Name _____ Class _____ Date _____

Archimedes had a measure on the side of his pool to let him know when the water levels rose and fell. One day the water level was right on the line. Archimedes hopped in and noticed that the level rose above the line. Using a marker he drew a line at the new level.

When he hopped out he noticed the level returned back to the normal mark.

Archimedes wanted to know if the level the water rose had anything to do with his weight.

Using the hose, he filled the pool up to the exact level it reached when he jumped in.

He decided to measure the amount of water he had added by removing it in bucket loads and counting the buckets. He knew that each bucket held 6 liters.

1. Archimedes weighs 138 kilos. How many bucket loads will he need to remove to return the water level to the normal mark?
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2. Archimedes' family thought he was crazy. He told Mrs. Archimedes he could guess how much she weighed if she hopped in the pool and did not splash around too

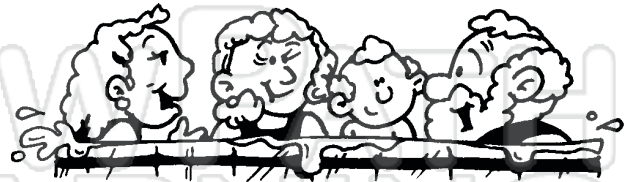


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3. How many buckets are needed?

Hint: Don't forget Aunty Agnes!



Challenge:

A worm is at the bottom of a twenty meter well. It can crawl upwards at the rate of four meters a day but at night it always slips back three meters. At this rate how long will it take before the worm can crawl out of the well?



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1. What is the total capacity of the pool? **37.5 cubic meters**

Volume, Capacity and Mass are related. Look at the table below:

Capacity (milliliters)	Volume (cubic centimeters)	Mass (grams)
1 mL	1 cm ³	1 g
10 mL	10 cm ³	10 g
100 mL	100 cm ³	100 g
200 mL	200 cm ³	200 g
500 mL	500 cm ³	500 g
1 L	1000 cm ³	1 kg



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3. How much chlorine does Archimedes need for one year? **130 liters**

4. Which offer should Archimedes take if he puts the same amount of chlorine in his pool all year round? **Chlorine World is cheapest, but Bulk Chlorine will have left overs.**

5. Will he have any chlorine left over? **50 liters if he buys from Bulk Chlorine.**

Challenge:

If three hours ago it was as long after one o'clock in the morning as it was before one o'clock in the afternoon, what time would it be now? **10:00 am**



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When he hopped out he noticed the level returned back to the normal mark.

Archimedes wanted to know if the level the water rose had anything to do with his weight.

Using the hose, he filled the pool up to the exact level it reached when he jumped in.

He decided to measure the amount of water he had added by removing it in bucket loads and counting the buckets. He knew that each bucket held 6 liters.

1. Archimedes weighs 138 kilos. How many bucket loads will he need to remove to return the water level to the normal mark?

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2. Archimedes' family thought he was crazy. He told Mrs. Archimedes he could guess how much she weighed if she hopped in the pool and did not splash around too



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3. How many buckets are needed? **67 buckets.**

Hint: Don't forget Aunty Agnes!



Challenge:

A worm is at the bottom of a twenty meter well. It can crawl upwards at the rate of four meters a day but at night it always slips back three meters. At this rate how long will it take before the worm can crawl out of the well? **17 days**