



Year 4 Mathematics

Volume & Capacity Workshop

Worksheet 35: Reading Scales & Units

Name: _____ Date: _____

Section 1: Fluency - Choosing mL or L

Select the most appropriate unit for measuring capacity.

Remember: mL = millilitres (small amounts), L = litres (larger amounts)

1,000 mL = 1 L

1. Would you measure the water in a swimming pool in millilitres (mL) or litres (L)?

Answer: _____

2. Would you measure a spoonful of medicine in mL or L?

Answer: _____

3. Which unit would you use to measure the water in a fish tank?

Circle one: **mL** **L**

Answer: _____

4. Which unit would you use to measure a drop of food colouring?

Answer: _____



5. Would you measure the petrol in a car's fuel tank in mL or L?

Answer: _____

6. Which unit would you use to measure a glass of water?

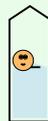
Answer: _____

7. Match each container with the best unit:

- A bathtub full of water _____
- An eyedropper of liquid _____
- A large water bottle _____
- A teaspoon of vanilla extract _____

8. True or False: You would measure the capacity of a bucket in millilitres.

Answer: _____



Capacity Cat!

Capacity Captain!

Why did the measuring jug go to school?

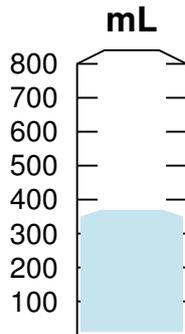
To learn about its capacity for learning!



Section 2: Visual Modeling - Reading Measuring Jugs

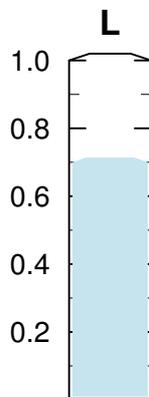
Read the volume of liquid shown in each measuring jug.

9. How much liquid is in this jug?



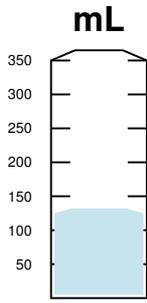
Answer: _____ mL

10. What volume is shown in this measuring cylinder?



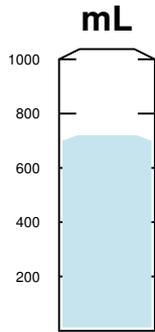
Answer: _____ L

11. Read the measurement shown:



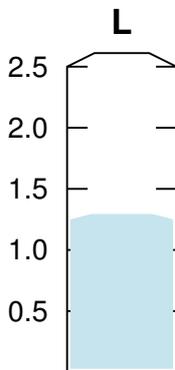
Answer: _____ mL

12. How many millilitres are shown?



Answer: _____ mL

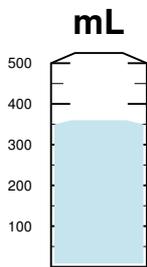
13. What is the capacity shown in this jug?



Answer: _____ L



14. Read this measurement:



Answer: _____ mL



Measurement Master!

Why did the water level go to the party?

Because it wanted to raise the volume!



Section 3: Reasoning - Scales and Intervals

Calculate values between marked intervals on measuring instruments.

15. If a jug has marks every 200 mL, what is the value of the mark exactly halfway between 600 mL and 800 mL?

Answer: _____ mL

16. A measuring cylinder shows marks at 0.5 L, 1.0 L, 1.5 L, and 2.0 L. What is the value halfway between 1.0 L and 1.5 L?

Answer: _____ L

17. If the marks on a jug go: 100 mL, 200 mL, 300 mL... and there are 5 small marks between each, what does each small mark represent?

Answer: _____ mL

18. A jug is marked every 250 mL. What two values are on either side of 1,000 mL?

Answer: _____ and _____

19. If a measuring cylinder has marks at 0, 50, 100, 150, 200 mL, and the water level is at the second small line above 100 mL, approximately how much water is there?

Answer: _____ mL



20. Between the 1.0 L and 2.0 L marks, there are 10 equal divisions. What is the value of each division?

Answer: _____ L

21. A jug shows major marks at 0, 500, 1000 mL. If the water is at the line exactly $\frac{3}{4}$ of the way between 500 and 1000, how much water is in the jug?

Answer: _____ mL

22. Challenge: A measuring jug has marks every 100 mL from 0 to 1000 mL. If there are 4 small unmarked lines between each major mark, what value does the second small line represent between 300 mL and 400 mL?

Answer: _____ mL



Scale Superstar!

Why did the ruler and the measuring jug become friends?

Because they both liked to measure up!

Excellent work! You're becoming an expert at reading capacity!



Answer Key

Worksheet 35: Reading Scales & Units

Section 1: Fluency - Choosing mL or L

1. Answer: **Litres (L)**
2. Answer: **Millilitres (mL)**
3. Answer: **L (Litres)**
4. Answer: **mL (Millilitres)**
5. Answer: **L (Litres)**
6. Answer: **mL (Millilitres)** - accept L for very large glasses
7. Answers:
 - A bathtub full of water: **L**
 - An eyedropper of liquid: **mL**
 - A large water bottle: **L or mL** (both acceptable)
 - A teaspoon of vanilla extract: **mL**
8. Answer: **False** - buckets are better measured in litres

Section 2: Visual Modeling - Reading Measuring Jugs

9. Answer: **350 mL**
10. Answer: **0.7 L**
11. Answer: **125 mL**
12. Answer: **700 mL**
13. Answer: **1.25 L** or **1.3 L**
14. Answer: **350 mL**



Section 3: Reasoning - Scales and Intervals

15. Answer: **700 mL**

Working: Halfway between 600 and 800 is

$$\frac{600 + 800}{2} = 700$$

16. Answer: **1.25 L**

Working: Halfway between 1.0 and 1.5 is

$$\frac{1.0 + 1.5}{2} = 1.25$$

17. Answer: **20 mL**

Working:

$$100 \div 5 = 20$$

mL per small mark

18. Answer: **750 mL and 1,250 mL**

Working: Marks go 250, 500, 750, 1000, 1250...

19. Answer: **Approximately 120 mL**

Working: Each small interval is 10 mL, so $100 + 20 = 120$ mL

20. Answer: **0.1 L**

Working:

$$1.0 \div 10 = 0.1$$

L

21. Answer: **875 mL**

Working: Distance = 500 mL,

$$\frac{3}{4}$$

of 500 = 375, so $500 + 375 = 875$ mL

22. Answer: **340 mL**

Working: $100 \text{ mL} \div 5 \text{ intervals} = 20 \text{ mL each}$. Second small line = $300 + 40 = 340$ mL



Year 4 Mathematics

Volume & Capacity Workshop

Worksheet 36: Conversions & Displacement

Name: _____

Date: _____

Section 1: Fluency - Simple Conversions

Convert between millilitres and litres.

Remember: $1,000 \text{ mL} = 1 \text{ L}$

1. How many millilitres are in 4 litres?

Answer: _____ mL

2. Convert 2,500 mL into litres and millilitres.

Answer: _____ L and _____ mL

3. How many litres are in 7,000 mL?

Answer: _____ L

4. Convert 3 L 250 mL into millilitres only.

Answer: _____ mL

5. How many millilitres are in 0.5 L?



Answer: _____ mL

6. Convert 4,800 mL into litres and millilitres.

Answer: _____ L and _____ mL

7. Complete: 6.5 L = _____ mL

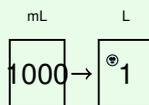
8. Complete: 5,250 mL = _____ L and _____ mL

9. How many litres are in 12,000 mL?

Answer: _____ L

10. Convert 2.75 L into millilitres.

Answer: _____ mL



Conversion Champ!

Why did 1000 mL feel proud?

Because it measured up to 1 whole litre!



Section 2: Problem Solving - Comparing Volumes

Compare and order different volumes.

11. Which is greater: 1.5 L or 1,450 mL? Explain your answer.

Answer: _____

Explanation: _____

12. Order these volumes from smallest to largest:

2 L 1,500 mL 2,500 mL 1.8 L

Answer: _____

13. Which is less: 3.2 L or 3,250 mL?

Answer: _____

14. Emma drinks 250 mL of juice. Tom drinks 0.3 L of juice. Who drinks more?

Answer: _____

15. A recipe needs 750 mL of milk. You have 1 L. Do you have enough? How much will be left over?

Answer: _____

16. Which container holds more: Container A with 2.4 L or Container B with

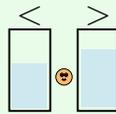


2,350 mL?

Answer: _____

17. Jack pours 500 mL of water into a 1 L jug, then adds another 650 mL. How much water is in the jug now? Express your answer in litres and millilitres.

Answer: _____ L and _____ mL



Comparison King!

Why did the litre feel bigger than the millilitre?

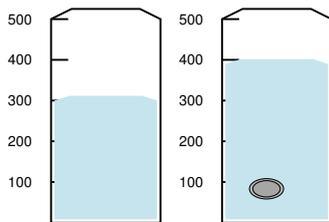
Because it had 1000 times more capacity!



Section 3: Challenge - Volume Displacement

Understand and calculate volume using displacement.

18. Look at these two measuring jugs:



Before **After (with rock)**

Water level before: _____ mL

Water level after: _____ mL

What is the volume of the rock?

Answer: _____ mL

19. A measuring cylinder has 400 mL of water. When a toy car is placed in it, the water rises to 485 mL. What is the volume of the toy car?

Answer: _____ mL

20. A jug contains 1.2 L of water. When a stone is added, the water level rises to 1,380 mL. What is the volume of the stone?

Answer: _____ mL

21. Challenge: A container has 650 mL of water. Three identical marbles are dropped in and the water rises to 740 mL. What is the volume of one marble?



Answer: _____ mL

22. Super Challenge: A measuring jug starts with 0.5 L of water. A rock is placed in it and the water rises to 725 mL. What is the volume of the rock in millilitres?

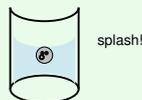
Answer: _____ mL

23. A cylinder has water at the 200 mL mark. When an object is submerged, the water rises to 285 mL. If a second identical object is added, what will the new water level be?

Answer: _____ mL

24. Ultimate Challenge: A jug has 1 L of water. Four identical cubes are placed in it, raising the water level to 1,240 mL. What is the volume of each cube?

Answer: _____ mL



Volume VIP!

*Why did the student bring a ladder to the pool?
Because they wanted to dive into 'high' volume!*

Amazing work! You've mastered volume and capacity!



Answer Key

Worksheet 36: Conversions & Displacement

Section 1: Fluency - Simple Conversions

1. Answer: **4,000 mL**

Working:

$$4 \times 1,000 = 4,000$$

2. Answer: **2 L and 500 mL**

Working:

$$2,500 \div 1,000 = 2.5$$

L or 2 L 500 mL

3. Answer: **7 L**

Working:

$$7,000 \div 1,000 = 7$$

4. Answer: **3,250 mL**

Working:

$$(3 \times 1,000) + 250 = 3,250$$

5. Answer: **500 mL**

Working:

$$0.5 \times 1,000 = 500$$

6. Answer: **4 L and 800 mL**

Working:

$$4,800 = 4,000 + 800$$

7. Answer: **6,500 mL**

Working:

$$6.5 \times 1,000 = 6,500$$

8. Answer: **5 L and 250 mL**



Working:

$$5,250 = 5,000 + 250$$

9. Answer: **12 L**

Working:

$$12,000 \div 1,000 = 12$$

10. Answer: **2,750 mL**

Working:

$$2.75 \times 1,000 = 2,750$$

Section 2: Problem Solving - Comparing Volumes

11. Answer: **1.5 L is greater**

Explanation: **1.5 L = 1,500 mL, which is 50 mL more than 1,450 mL**

12. Answer: **1,500 mL, 1.8 L, 2 L, 2,500 mL**

Working: Convert all to mL: 1500, 1800, 2000, 2500

13. Answer: **3.2 L**

Working: 3.2 L = 3,200 mL which is less than 3,250 mL

14. Answer: **Tom drinks more**

Working: 0.3 L = 300 mL which is more than 250 mL

15. Answer: **Yes, with 250 mL left over**

Working: 1 L = 1,000 mL, so $1,000 - 750 = 250$ mL left

16. Answer: **Container A (2.4 L)**

Working: 2.4 L = 2,400 mL which is more than 2,350 mL

17. Answer: **1 L and 150 mL**

Working: $500 + 650 = 1,150$ mL = 1 L 150 mL

Section 3: Challenge - Volume Displacement

18. Before: **300 mL**

After: **390 mL**



Volume of rock: **90 mL**

Working: $390 - 300 = 90 \text{ mL}$

19. Answer: 85 mL

Working: $485 - 400 = 85 \text{ mL}$

20. Answer: 180 mL

Working: $1.2 \text{ L} = 1,200 \text{ mL}$; $1,380 - 1,200 = 180 \text{ mL}$

21. Answer: 30 mL

Working: Total displacement = $740 - 650 = 90 \text{ mL}$; One marble = $90 \div 3 = 30 \text{ mL}$

22. Answer: 225 mL

Working: $0.5 \text{ L} = 500 \text{ mL}$; $725 - 500 = 225 \text{ mL}$

23. Answer: 370 mL

Working: First object = $285 - 200 = 85 \text{ mL}$; Second adds another 85 mL ; $285 + 85 = 370 \text{ mL}$

24. Answer: 60 mL

Working: $1 \text{ L} = 1,000 \text{ mL}$; Total displacement = $1,240 - 1,000 = 240 \text{ mL}$; Each cube = $240 \div 4 = 60 \text{ mL}$

Spectacular Success!

You've mastered volume, capacity, and displacement!

Keep measuring and discovering!