Merit Tutoring

Worksheet 23

Year 3 Mathematics — Australian Curriculum v9.0

Subtopic: Use Metric Units for Length, Mass and Capacity

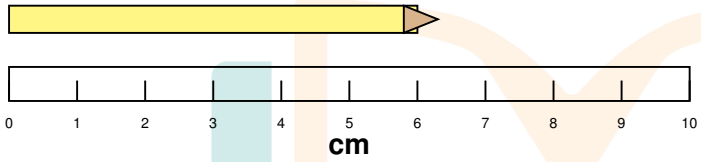
Name: _____ **Date:** _____

Score: _____ / 30

Section 1: Fluency — Reading a Ruler (Questions 1–10)

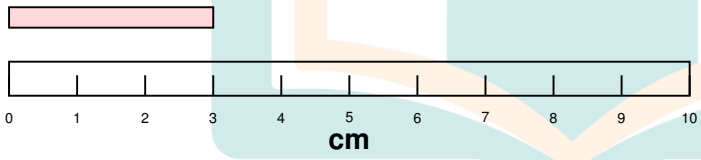
Instructions: Measure the length of each object using the ruler.

Question 1: How long is this pencil?



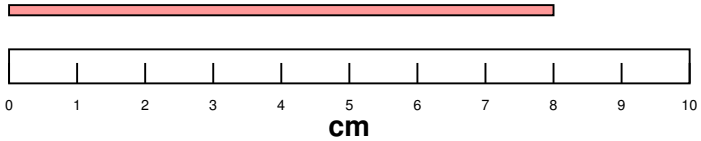
Answer: _____

Question 2: How long is this eraser?



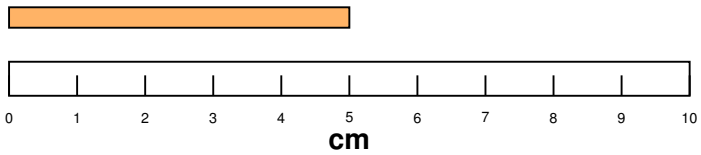
Answer: _____

Question 3: Measure this straw:



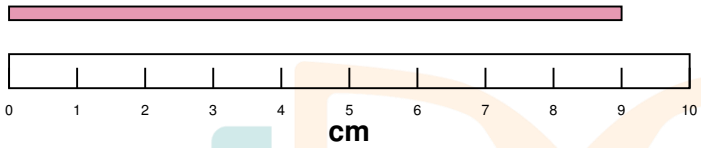
Answer: _____

Question 4: How long is this crayon?



Answer: _____

Question 5: Measure this ribbon:



Answer: _____

Question 6: A line measures from 0 to 7 cm. How long is it?

Answer: _____

Question 7: A pen is 10 cm long. Draw a line representing this length.

Question 8: Which is longer: 5 cm or 50 cm?

Answer: _____

Question 9: A paperclip is 4 cm. A pencil is 12 cm. How much longer is the pencil?

Answer: _____

Question 10: How many centimeters are in 1 meter?

Answer: _____

Good Job!

What has no legs but one foot? A ruler!

Section 2: Reasoning — Choosing Units (Questions 11–20)

Instructions: Choose the correct unit (cm or m) for measuring each object.

Question 11: Would you measure the length of a footy oval in cm or m?

Answer: _____

Question 12: Would you measure an ant in cm or m?

Answer: _____

Question 13: Circle the best unit for measuring your height: cm or m?

Answer: _____

Question 14: Would you measure a classroom in cm or m?

Answer: _____

Question 15: Circle the best unit for a paperclip: cm or m?

Answer: _____

Question 16: A swimming pool length: cm or m?

Answer: _____

Question 17: Your fingernail width: cm or m?

Answer: _____

Question 18: A road distance: cm or m (or km)?

Answer: _____

Question 19: The width of your desk: cm or m?

Answer: _____

Question 20: A caterpillar's length: cm or m?

Answer: _____

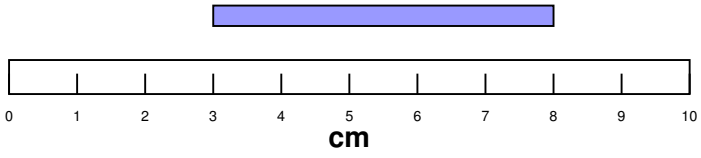
Good Job!

Why did the meter refuse to run a race? It didn't want to be measured!

Section 3: Challenge — Broken Ruler Problems (Questions 21–30)

Instructions: Solve these tricky measurement problems.

Question 21: This pencil starts at 3 cm and ends at 8 cm. How long is it?



Answer: _____

Question 22: An eraser starts at 2 cm and ends at 6 cm. What is its length?

Answer: _____

Question 23: A straw goes from 1 cm to 9 cm on a ruler. How long is the straw?

Answer: _____

Question 24: If an object starts at 4 cm and ends at 10 cm, what is the length?

Answer: _____

Question 25: A ribbon measures from the 5 cm mark to the 12 cm mark. How long?

Answer: _____

Question 26: Two pencils are placed end-to-end. One is 6 cm, the other is 8 cm. What is the total length?

Answer: _____

Question 27: A rope is 15 cm. You cut off 4 cm. How long is it now?

Answer: _____

Question 28: If 1 meter = 100 cm, how many cm is 2 meters?

Answer: _____

Question 29: A book is 20 cm tall. A box is 30 cm tall. How much taller is the box?

Answer: _____

Question 30: Three straws are 5 cm each. What is their total length when joined?

Answer: _____

Good Job!

Why was the measurement book so thick? It had too many feet!

Excellent Work! You've completed Worksheet 23!

Answer Key — Worksheet 23

Year 3 Mathematics

Section 1: Fluency

1. 6 cm
2. 3 cm
3. 8 cm
4. 5 cm
5. 9 cm
6. 7 cm
7. Check student drawing (10 cm line)
8. 50 cm
9. 8 cm
10. 100 cm

Section 2: Reasoning

11. m (meters)
12. cm
13. cm (or m acceptable)
14. m
15. cm
16. m
17. cm
18. m (or km)
19. cm
20. cm

Section 3: Challenge

21. 5 cm (8 - 3 = 5)
22. 4 cm (6 - 2 = 4)
23. 8 cm (9 - 1 = 8)
24. 6 cm (10 - 4 = 6)
25. 7 cm (12 - 5 = 7)
26. 14 cm
27. 11 cm
28. 200 cm
29. 10 cm
30. 15 cm

Worksheet 24

Year 3 Mathematics — Australian Curriculum v9.0

Subtopic: Use Metric Units for Length, Mass and Capacity

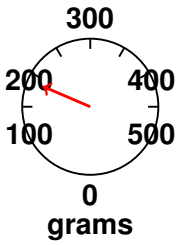
Name: _____ **Date:** _____

Score: _____ / 30

Section 1: Fluency — Reading Scales & Jugs (Questions 1–10)

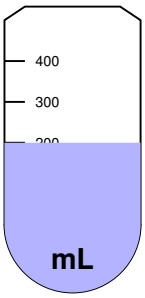
Instructions: Read the measuring instruments and write your answer.

Question 1: How heavy is the item on this scale?



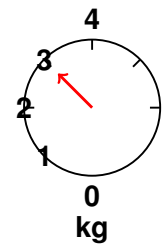
Answer: _____

Question 2: How much water is in this jug?



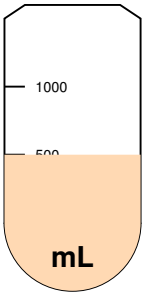
Answer: _____

Question 3: What mass is shown on this scale?



Answer: _____

Question 4: How much liquid is in the jug?



Answer: _____

Question 5: Read the scale (in grams):

Answer: 750 g (if pointer shown at 750)

Question 6: A bottle holds 1 Liter. How many milliliters is that?

Answer: _____

Question 7: Which is heavier: 1000 g or 1 kg?

Answer: _____

Question 8: How many grams are in 2 kg?

Answer: _____

Question 9: A jug has 250 mL. You add 250 mL more. How much now?

Answer: _____

Question 10: If 1 L = 1000 mL, what is 2 L in mL?

Answer: _____

Good Job!

Why did the cup go to the doctor? It was feeling drained!

Section 2: Reasoning — Estimation (Questions 11–20)

Instructions: Choose the best estimate for each item.

Question 11: Circle the best estimate for a cat's mass: 4 g or 4 kg?

Answer: _____

Question 12: Circle the best estimate for a teaspoon of water: 5 mL or 5 L?

Answer: _____

Question 13: Which is the best estimate for an apple's mass: 200 g or 200 kg?

Answer: _____

Question 14: A swimming pool capacity: 50 mL or 50 000 L?

Answer: _____

Question 15: A feather's mass: 1 g or 1 kg?

Answer: _____

Question 16: A bucket of water: 10 mL or 10 L?

Answer: _____

Question 17: Your mass: 30 g or 30 kg?

Answer: _____

Question 18: A glass of milk: 250 mL or 250 L?

Answer: _____

Question 19: A textbook's mass: 500 g or 500 kg?

Answer: _____

Question 20: An eyedropper holds: 1 mL or 1 L?

Answer: _____

Good Job!

Why did the scale break up with the ruler? It had too much weight on its shoulders!

Section 3: Challenge — Comparison (Questions 21–30)

Instructions: Compare measurements and solve problems.

Question 21: Which is more: 2 Liters of milk or 500 mL of juice? Explain.

Answer: _____

Question 22: Which is heavier: 3 kg or 2500 g?

Answer: _____

Question 23: Order from lightest to heaviest: 500 g, 2 kg, 100 g

Answer: _____

Question 24: Order from smallest to largest: 250 mL, 2 L, 100 mL

Answer: _____

Question 25: A bag weighs 1.5 kg. Another weighs 1200 g. Which is heavier?

Answer: _____

Question 26: You pour 300 mL into a 1 L jug. How much more can it hold?

Answer: _____

Question 27: Two bottles: one has 750 mL, the other 0.5 L. Which has more?

Answer: _____

Question 28: A recipe needs 500 g flour. You have 0.6 kg. Is that enough?

Answer: _____

Question 29: A tank has 5 L. You use 2500 mL. How much is left?

Answer: _____

Question 30: Three bags weigh 200 g, 300 g, and 500 g. What is the total mass?

Answer: _____

Good Job!

What did the liter say to the milliliter? You're just a small part of me!

Fantastic! You've completed Worksheet 24!

Answer Key — Worksheet 24

Year 3 Mathematics

Section 1: Fluency

1. 200 g
2. 200 mL
3. 3 kg
4. 500 mL
5. 750 g
6. 1000 mL
7. They are equal (1000 g = 1 kg)
8. 2000 g
9. 500 mL
10. 2000 mL

Section 2: Reasoning

11. 4 kg
12. 5 mL
13. 200 g
14. 50 000 L
15. 1 g
16. 10 L
17. 30 kg
18. 250 mL
19. 500 g
20. 1 mL

Section 3: Challenge

21. 2 L (2000 mL is more than 500 mL)
22. 3 kg (3000 g vs 2500 g)
23. 100 g, 500 g, 2 kg
24. 100 mL, 250 mL, 2 L
25. 1.5 kg (1500 g vs 1200 g)
26. 700 mL (1000 - 300 = 700)
27. 750 mL (750 vs 500)
28. Yes (600 g is more than 500 g)
29. 2.5 L or 2500 mL (5000 - 2500 = 2500)
30. 1000 g or 1 kg