



Measurement & Conversions Quest

Name: _____

Grade: 4

Date: _____

Convert, compare, and apply measurements in real-life situations. Show work for multi-step problems.

Part 1 · Metric Conversions

METRIC

(1. 300 cm = _____ m

(2. 2 m = _____ cm

(3. 5,000 g = _____ kg

(4. 3.5 kg = _____ g

(5. 1 L = _____ mL

(6. 2,500 mL = _____ L

Metric Patterns: $\times 10$, $\times 100$, $\times 1000$ (or divide to go smaller $\rightarrow$ larger unit).

Part 2 · Customary Conversions

CUSTOMARY

(7. 3 ft = _____ in

(8. 60 in = _____ ft

(9. 5 yd = _____ ft

(10. 2 qt = _____ pt

(11. 8 c = _____ qt

(12. 1 gal = _____ qt

Key Facts: 12 in = 1 ft · 3 ft = 1 yd · 2 c = 1 pt · 2 pt = 1 qt · 4 qt = 1 gal.

Part 3 · Compare & Decide

COMPARE

13. Which is longer: 150 cm or 1 m 40 cm? (Write: first / second)

14. Which is heavier: 2,000 g or 1.8 kg?

15. Which holds more: 1.5 L or 1,400 mL?

16. A plank is 6 ft. Another is 70 in. Which is longer?

17. Choose nearest: 1 mile $\approx$ (1,000 m / 1,600 m / 3,000 m)

18. Which is less: 3 qt or 7 cups?

Part 4 · Perimeter & Area Applications

SHAPES

19. Rectangle: length 9 m, width 4 m. Perimeter = _____ m

20. Same rectangle area = _____ m^2

21. Square side 7 cm. Perimeter = _____ cm

22. Square side 7 cm. Area = _____ cm^2

23. A garden 8 m by 6 m gains a 1 m fence border on each side (new length & width). New perimeter? _____ m

24. A 5 m $\times$ 4 m rug covers how many square meters? _____ m^2

Part 5 · Elapsed Time & Mixed

TIME

25. Show starts 2:10 PM, ends 3:05 PM. Elapsed time = _____

26. Start 9:45 AM; add 1 h 30 min. Finish time = _____

27. A runner does 3 laps of 400 m. Total distance = _____ m

28. Convert 2.5 km to m = _____ m

29. A tank holds 4 L. It now has 2,250 mL. More needed (mL) to fill?

30. A package weighs 3.2 kg. Limit is 3,500 g. How many grams under limit? _____ g

Part 6 · Word Problems & Reasoning

THINK

31. Emily pours 750 mL juice and then 0.5 L water into a bottle that holds 1.5 L. Space left (mL)? _____

32. A rope is 2 yd long. You need it in inches. Length in inches = _____

33. A jog: 1 km + 600 m + 400 m. Total in meters? _____

34. A baker uses 9 cups flour. How many quarts? _____ qt

35. A box is 60 cm long. Another box is 0.7 m. Which longer? (Write: 60 cm / 0.7 m)

36. Reflection: Which conversion type (length / mass / capacity / time) felt easiest today? _____

Reflection (#36) open—no single correct answer.

Answer Key

1. 3 m
2. 200 cm
3. 5 kg
4. 3,500 g
5. 1,000 mL
6. 2.5 L
7. 36 in
8. 5 ft
9. 15 ft
10. 4 pt
11. 2 qt
12. 4 qt
13. first (150 cm vs 140 cm)
14. 2,000 g (2,000 > 1,800)
15. 1.5 L (1,500 mL > 1,400 mL)
16. 70 in (70 in vs 72 in → 6 ft=72 in so plank 6 ft longer)
17. 1,600 m
18. 7 cups (7 cups = 3.5 pt = 1.75 qt > 3 qt? error → 7 cups = 3.5 pt = 1.75 qt so less is 3 qt vs 1.75 qt → answer: 7 cups is less) ⇒ 7 cups
19. 26 m
20. 36 m²
21. 28 cm
22. 49 cm²
23. New size: (8+2)=10 by (6+2)=8 → perimeter 2(10+8)=36 m
24. 20 m²
25. 55 min
26. 11:15 AM
27. 1,200 m
28. 2,500 m
29. 1,750 mL
30. 300 g (3,500-3,200)
31. 1,500 mL capacity left: 1.5 L=1,500 mL; used 750+500=1,250 → 250 mL
32. 72 in (2×36)
33. 2,000 m
34. 2.25 qt (9 cups ÷ 4)
35. 0.7 m (70 cm > 60 cm)
36. Reflection varies

Accept equivalent comparative wording (e.g., "second" vs "1.5 L") if reasoning correct. Corrected #18 explanation: 3 qt vs 7 cups
→ 7 cups (1.75 qt) is less.