Measurement Word Problems

Name: _____	Date: _____	Score: _____ / 24

Quick Review

Measurement word problems mix **converting units** with **adding, subtracting, multiplying, or dividing**. The smart first step is to make sure every number uses the **same unit**. If one length is in meters and another is in centimeters, change them both to centimeters before you do any math. Remember: going to a **smaller** unit means **multiply**, and the number gets bigger. After the units match, just solve the problem the normal way. **Always label your answer** with the correct unit so the reader knows what the number means.

◇ **Example:** A ribbon is 3 meters long. Sam cuts off 80 centimeters. How many centimeters of ribbon are left?
⇒ The two measurements use different units, so let's make them match. Change 3 meters into centimeters: since 1 m $= 100$ cm, that is $3 \times 100 = 300$ cm. Now both numbers are in centimeters, so we can subtract: $300 - 80 = 220$. Sam has 220 cm of ribbon left. Don't forget the label — centimeters!

Answer: 220 cm

PRACTICE

Solve each problem. Convert units first when you need to.

1. A rope is 2 m long. Add 50 cm. Total in cm? _____
2. A trip took 1 hour and 20 minutes. How many minutes is that? _____
3. A bag holds 3 kg. Remove 500 g. Weight in g? _____
4. A board is 4 ft long. Cut off 5 in. Length in inches? _____
5. A jug holds 2 L. Pour out 300 mL. Amount left in mL? _____
6. A song is 3 minutes long. How many seconds is that? _____
7. A path is 1 km long. Walk 400 m. Meters left? _____
8. Three shelves are each 2 ft long. Total length in inches? _____
9. A pitcher holds 4 L. Share it into 4 equal cups. mL per cup? _____
10. A movie is 2 hours and 15 minutes. Total minutes? _____
11. A wall is 5 m long. Add 75 cm. Total in cm? _____
12. A box weighs 2 kg. Add 250 g. Total in g? _____
13. A ribbon is 6 ft long. Cut into 3 equal pieces. Inches per piece? _____
14. A recess is 25 minutes. How many seconds is that? _____
15. Two bottles hold 3 L each. Total amount in mL? _____
16. A trail is 2 km long. Bike 1,300 m. Meters left? _____
17. A cat weighs 4 kg. A kitten weighs 600 g. Difference in g? _____
18. A plank is 9 ft long. Cut off 2 ft. Length left in inches? _____
19. A class is 1 hour long. 35 minutes have passed. Minutes left? _____
20. Four jugs hold 2 L each. Total amount in mL? _____

Word Problems

21. Noah ran for 1 hour and 45 minutes on Saturday. How many minutes did he run in all? _____
22. A bag of flour weighs 3 kilograms. A baker uses 750 grams. How many grams of flour are left? _____
23. Ava has 5 meters of yarn. She cuts it into 5 equal pieces for a craft project. How long is each piece in centimeters? _____
24. A juice cooler holds 4 liters. Students drink $1{,}500$ milliliters at lunch. How many milliliters are left? _____

Answer Keys

1. 250 cm
2. 80 min
3. 2,500 g
4. 43 in
5. 1,700 mL
6. 180 sec
7. 600 m
8. 72 in
9. 1,000 mL
10. 135 min
11. 575 cm
12. 2,250 g
13. 24 in
14. 1,500 sec
15. 6,000 mL
16. 700 m
17. 3,400 g
18. 84 in
19. 25 min
20. 8,000 mL
21. 105 minutes
22. 2,250 grams
23. 100 cm
24. 2,500 mL

Step-by-Step Explanations

1. Change 2 m to 200 cm, then add: $200 + 50 = 250$ cm.
2. 1 hour $= 60$ min, then $60 + 20 = 80$ min.
3. Change 3 kg to 3,000 g, then $3{,}000 - 500 = 2{,}500$ g.
4. 4 ft $= 48$ in, then $48 - 5 = 43$ in.
5. 2 L $= 2{,}000$ mL, then $2{,}000 - 300 = 1{,}700$ mL.
6. 1 min $= 60$ sec, so $3 \times 60 = 180$ sec.
7. 1 km $= 1{,}000$ m, then $1{,}000 - 400 = 600$ m.
8. Each shelf is 24 in, so $3 \times 24 = 72$ in.
9. 4 L $= 4{,}000$ mL, then $4{,}000 \div 4 = 1{,}000$ mL.
10. 2 hours $= 120$ min, then $120 + 15 = 135$ min.
11. 5 m $= 500$ cm, then $500 + 75 = 575$ cm.
12. 2 kg $= 2{,}000$ g, then $2{,}000 + 250 = 2{,}250$ g.
13. 6 ft $= 72$ in, then $72 \div 3 = 24$ in.
14. 1 min $= 60$ sec, so $25 \times 60 = 1{,}500$ sec.
15. Each bottle is 3,000 mL, so $2 \times 3{,}000 = 6{,}000$ mL.
16. 2 km $= 2{,}000$ m, then $2{,}000 - 1{,}300 = 700$ m.
17. 4 kg $= 4{,}000$ g, then $4{,}000 - 600 = 3{,}400$ g.
18. $9 - 2 = 7$ ft left, and $7 \times 12 = 84$ in.
19. 1 hour $= 60$ min, then $60 - 35 = 25$ min.
20. Each jug is 2,000 mL, so $4 \times 2{,}000 = 8{,}000$ mL.
21. Change 1 hour to minutes: $1 \times 60 = 60$ min. Then add the extra time: $60 + 45 = 105$ minutes.
22. Change 3 kg to grams: $3 \times 1{,}000 = 3{,}000$ g. Then subtract what was used: $3{,}000 - 750 = 2{,}250$ g.
23. Change 5 m to centimeters: $5 \times 100 = 500$ cm. Then share it equally: $500 \div 5 = 100$ cm per piece.
24. Change 4 L to milliliters: $4 \times 1{,}000 = 4{,}000$ mL. Then subtract: $4{,}000 - 1{,}500 = 2{,}500$ mL.

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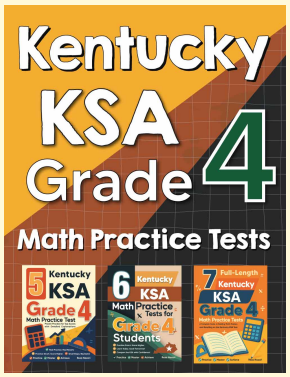

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