

Measurement Word Problems

Name: _____

Date: _____

Score: _____ / 24

Q 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 $1\text{ m} = 100\text{ cm}$, that is $3 \times 100 = 300\text{ cm}$. 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.

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

◆ Word Problems

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



Answer Keys

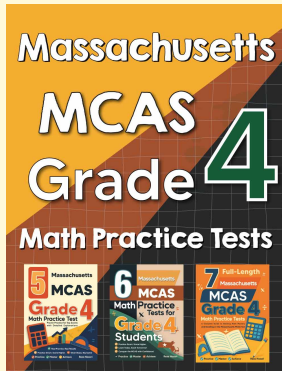
- | | |
|-------------|-----------------|
| 1. 250 cm | 13. 24 in |
| 2. 80 min | 14. 1,500 sec |
| 3. 2,500 g | 15. 6,000 mL |
| 4. 43 in | 16. 700 m |
| 5. 1,700 mL | 17. 3,400 g |
| 6. 180 sec | 18. 84 in |
| 7. 600 m | 19. 25 min |
| 8. 72 in | 20. 8,000 mL |
| 9. 1,000 mL | 21. 105 minutes |
| 10.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

Step-by-Step Explanations

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