

Grade 4 - Measurement Units and Conversions - Answer Key

Common Core 4.MD.A.1, 4.MD.A.2 · maths-pdf.fr/en/

Every worked solution below shows the unit fact, the multiplication or subtraction, and the final answer in bold. Check each step against your own work, and look at the diagrams to see why the numbers fit together.

Grade 4 · Common Core State Standards: **4.MD.A.1, 4.MD.A.2**

Exercise 1 - Kilometers to meters

1 km = 1,000 m, so multiply: $4 \times 1,000 = 4,000$.

4,000 m

Exercise 2 - Meters to centimeters

1 m = 100 cm, so $7 \times 100 = 700$.

700 cm

Exercise 3 - Kilograms to grams

Each kilogram is 1,000 g. Three blocks: $3 \times 1,000 = 3,000$.

3,000 g

Exercise 4 - Liters to milliliters

1 L = 1,000 mL, so $5 \times 1,000 = 5,000$.

5,000 mL

Exercise 5 - Pounds to ounces

1 lb = 16 oz, so $2 \times 16 = 32$.

32 oz

Exercise 6 - Hours to minutes

Move to 3 hr on the top line. The bottom line shows 180. Check: $3 \times 60 = 180$.

180 min

Exercise 7 - Minutes to seconds

1 min = 60 sec, so $5 \times 60 = 300$.

300 sec

Exercise 8 - Mixed length

2 m = $2 \times 100 = 200$ cm. Add 35: $200 + 35 = 235$.

235 cm

Exercise 9 - Fill the conversion table

Multiply each number of kilograms by 1,000.

1. $1 \times 1,000 = 1,000$
2. $2 \times 1,000 = 2,000$
3. $6 \times 1,000 = 6,000$
4. $8 \times 1,000 = 8,000$

1,000 g; 2,000 g; 6,000 g; 8,000 g

Exercise 10 - Compare liquid volumes

Change liters to milliliters: $2 \times 1,000 = 2,000$ mL.

Compare 2,000 and 2,500: 2,000 is less.

2 L < 2,500 mL

Exercise 11 - Hours and minutes

$3 \times 60 = 180$, then $180 + 20 = 200$.

200 min

Exercise 12 - Pounds and ounces

$4 \times 16 = 64$, then $64 + 6 = 70$.

70 oz

Exercise 13 - Minutes and seconds

$2 \times 60 = 120$, then $120 + 15 = 135$.

135 sec

Exercise 14 - Which is longer?

3 m = 300 cm, so 3 m 5 cm = 305 cm.

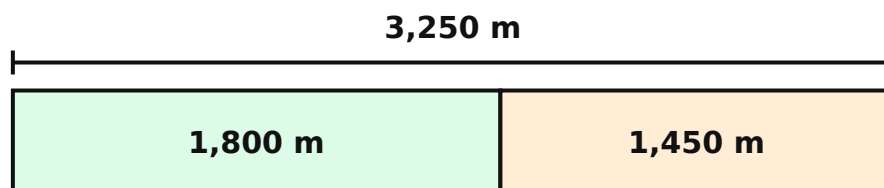
Compare 305 and 350: 350 is greater.

350 cm is longer.

Exercise 15 - Trail walk

Change the trail to meters: $3 \times 1,000 = 3,000$, then $3,000 + 250 = 3,250$ m.

Subtract the part walked: $3,250 - 1,800 = 1,450$.



Check: $1,800 + 1,450 = 3,250$.

1,450 mL left

Exercise 16 - Milk bottle

2 L = 2,000 mL.

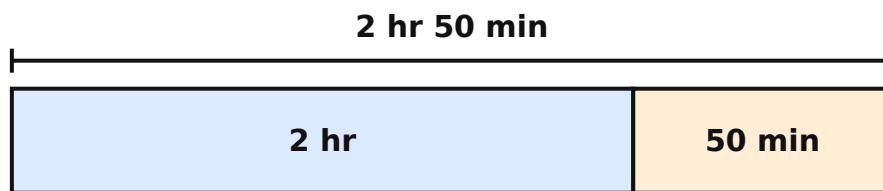
Amount poured: $750 + 450 = 1,200$.

Left: $2,000 - 1,200 = 800$.

800 mL

Exercise 17 - Movie time

Start at 3:15. Add 2 hours: 5:15. Add 50 minutes: $5:15 + 0:45 = 6:00$, plus 5 more minutes is 6:05.



3:15 PM then 5:15 PM then 6:05 PM

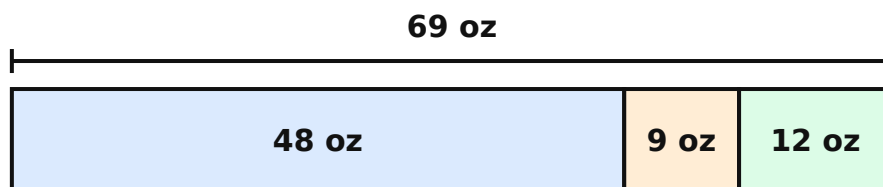
Two steps on a timeline.

6:05 PM

Exercise 18 - Backpack weight

Backpack: $3 \times 16 = 48$, then $48 + 9 = 57$ oz.

Add the lunch: $57 + 12 = 69$ oz.



3 lb is 48 oz.

$69 = 4 \times 16 + 5$, so 69 oz is 4 lb 5 oz.

69 oz = 4 lb 5 oz

Exercise 19 - Ribbon cost

$250 \text{ cm} = 2 \text{ m } 50 \text{ cm}$. Two meters cost $2 \times 6 = 12$ dollars.

50 cm is half a meter, so it costs half of \$6, which is \$3.

Total: $12 + 3 = 15$.

\$15

Exercise 20 - Cookie baking

Baking: $60 + 45 = 105 \text{ min}$.

Total: $105 + 25 + 50 = 180 \text{ min}$.

$180 = 3 \times 60$, so that is 3 hours. 9:30 AM + 3 hours = 12:30 PM.

180 min; he finishes at 12:30 PM