

SIGMABUDGIE · GRADE 4

Measurement, Time & Money

A gentle walkthrough & a 24-question exam

Part 1 walks through units, elapsed time, and money from the very beginning, with drawings. Part 2 is a 24-question exam that starts easy and slowly builds to harder, ISEE-style reasoning questions. Work through the lesson together first, then let your child try the exam. The answer key at the back explains every question.

1 • The metric ladder

Metric units go by tens: **1 m = 100 cm**, **1 km = 1,000 m**, **1 kg = 1,000 g**, **1 L = 1,000 mL**.

Bigger unit to smaller unit: **multiply**. $6\text{ m} = 6 \times 100 = 600\text{ cm}$. Smaller to bigger: **divide**. $4,000\text{ g} = 4\text{ kg}$.

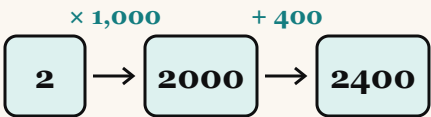
unit	equals
1 m	100 cm
1 km	1,000 m
1 kg	1,000 g
1 L	1,000 mL

the four facts to know

2 • Mixed units

"How many grams are in **2 kg 400 g**?" Convert the big part, then add the small part: $2 \times 1,000 = 2,000$, plus 400 = **2,400 g**.

6 m 79 cm = $600 + 79 = 679\text{ cm}$. **3 L 50 mL** = $3,000 + 50 = 3,050\text{ mL}$ (watch the zero).



2 kg 400 g = 2,400 g

3 • Customary units

1 foot = 12 inches, **1 yard = 3 feet**, **1 pound = 16 ounces**, **1 gallon = 4 quarts**.

5 feet 3 inches = $60 + 3 = 63\text{ inches}$. 2 yards = 6 feet = **72 inches**.

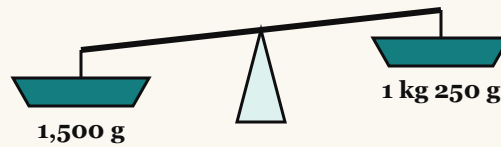
unit	equals
1 ft	12 in
1 yd	3 ft
1 lb	16 oz
1 gal	4 qt

customary facts

4 • Comparing in different units

Which is heavier, **1,500 g** or **1 kg 250 g**? Put both in grams: 1,500 vs 1,250. The **1,500 g** wins.

Always convert to the **same** unit before comparing. Usually the smaller unit is easiest.

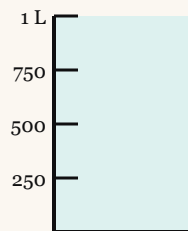


$$1,500 > 1,250$$

5 • How many fit?

"A wall is 6 m long. Tiles are 40 cm wide. How many tiles fit along the wall?" Same unit first: 6 m = 600 cm. Then $600 \div 40 = \mathbf{15}$ tiles.

"A 2 L jug fills 250 mL cups." $2,000 \div 250 = \mathbf{8}$ cups.

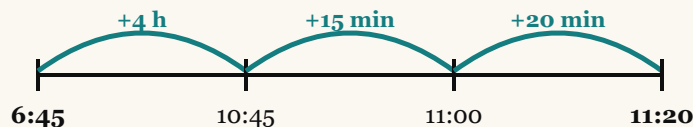


$$1 \text{ L} = 1,000 \text{ mL} = \text{four } 250 \text{ mL cups}$$

6 • Elapsed time: hop the hours, then the minutes

"A show starts at 6:45 p.m. and lasts 4 hours 35 minutes." Hop 4 hours: 10:45. Then 15 minutes to 11:00, and 20 more: **11:20 p.m.**

Split the minutes at the next o'clock so you never go past 60.

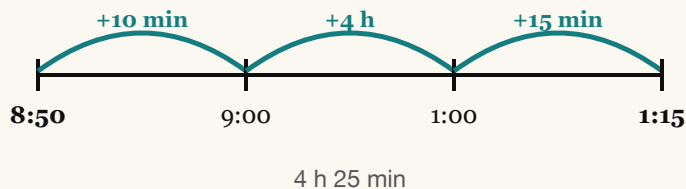


$$6:45 + 4 \text{ h } 35 \text{ min} = 11:20$$

7 • How long between two times?

From **8:50 a.m. to 1:15 p.m.**: 8:50 → 9:00 is 10 min. 9:00 → 1:00 is 4 h. 1:00 → 1:15 is 15 min. Total **4 h 25 min**.

Crossing noon is fine: 11 → 12 → 1 is two hours.



8 • Working back to a start time

"A class ends at 3:10 and lasted 1 hour 45 minutes. When did it start?" Go **backwards**: $3:10 - 1 \text{ h} = 2:10$. $2:10 - 10 \text{ min} = 2:00$. $2:00 - 35 \text{ min} = \mathbf{1:25}$.



started at 1:25

9 • Minutes and hours

1 h = 60 min. 150 minutes = 2 h 30 min ($60 + 60 + 30$). 3 h 20 min = 200 minutes.

A day is 24 hours, a week is 7 days, a year is 12 months or 52 weeks.

10 • Money with decimals

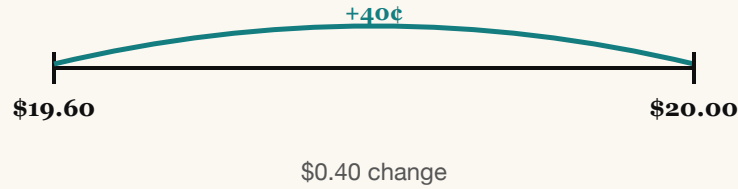
Money is written with two decimal places: **\$7.50** is 7 dollars and 50 cents. Line up the decimal points to add: $\$2.75 + \$4.00 = \mathbf{\$6.75}$.

2 books at \$2.75: $\$2.75 + \$2.75 = \$5.50$. Add the \$4.00 pen: **\$9.50**.

11 • Change from a bill

"A book costs \$7.50. Sam buys 2 and pays with \$20." Total $2 \times \$7.50 = \15.00 . Count up: \$15 $\rightarrow$ \$20 is **\$5.00** change.

"A book costs \$9.80. Leo buys 2, pays \$20." Total \$19.60. Count up 40¢: change **\$0.40**.



12 • Sharing a total

"Each ticket costs \$15. A group spends \$90. How many tickets?" $90 \div 15 = 6$. Count by 15s: 15, 30, 45, 60, 75, 90.

"\$150 shared by 6 friends": $\$150 \div 6 = \25 each. You are ready for the test! 🎉

Read each drawing first, then choose the best answer. Take your time, there is no clock here. Questions start gentle and get harder toward the end. Circle your answer.

1 How many centimeters are in 6 meters?

A 60

B 6,000

C 600

D 106

2 How many grams are in 4 kilograms?

A 4,000

B 400

C 40

D 4,100

3 How many minutes are in 2 hours?

A 200

B 60

C 100

D 120

4 $\$2.75 + \$4.00 = ?$

A \$6.50

B \$6.75

C \$7.75

D \$2.79

5 How many inches are in 1 foot?

A 12

B 10

C 3

D 36

6 A show starts at 3:00 p.m. and lasts 2 hours. What time does it end?

A 1:00 p.m.

B 3:20 p.m.

C 5:00 p.m.

D 5:00 a.m.

7 How many grams are in 2 kilograms and 400 grams?

A 240

B 2,400

C 2,040

D 6,400

8 How many centimeters are in 6 meters and 79 centimeters?

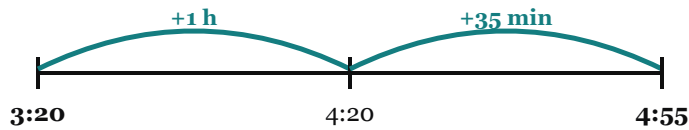
A 685

B 6,079

C 79

D 679

9 A show starts at 3:20 p.m. and lasts 1 hour 35 minutes. What time does it end?



A 4:55 p.m.

B 4:35 p.m.

C 5:05 p.m.

D 4:45 p.m.

10 Kai buys 2 books at \$2.75 each and a pen for \$4.00. How much in all?

A \$6.75

B \$8.50

C \$9.50

D \$9.75

11 Which is heavier: 1,500 g or 1 kg 250 g?

A 1 kg 250 g

B They are the same

C You cannot tell

D 1,500 g

12 How many inches are in 5 feet 3 inches?

A 53

B 63

C 15

D 60

13 Each ticket costs \$15. A group spends \$90 in total. How many tickets did they buy?

A 5

B 7

C 6

D 75

14 How many minutes are in 3 hours 20 minutes?

A 200

B 320

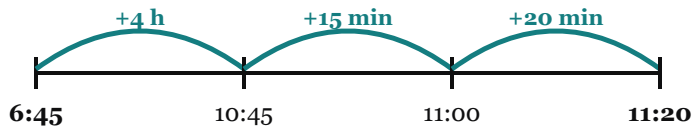
C 180

D 140

- 15 A wall is 6 m long. Tiles are 40 cm wide. How many tiles fit along the wall? (1 m = 100 cm)

A 150
B 15
C 24
D 14

- 16 A show starts at 6:45 p.m. and lasts 4 hours 35 minutes. What time does it end?



A 10:80 p.m.
B 11:10 p.m.
C 10:20 p.m.
D 11:20 p.m.

- 17 A book costs \$7.50. Sam buys 2 and pays with \$20.00. How much change does Sam get?

A \$12.50
B \$15.00
C \$4.50
D \$5.00

- 18 How many milliliters are in 3 liters and 50 milliliters?

A 350
B 3,050
C 3,500
D 3,005

- 19 How long is it from 8:50 a.m. to 1:15 p.m.?

A 4 hours 25 minutes
B 5 hours 25 minutes
C 4 hours 35 minutes
D 3 hours 25 minutes

- 20 A book costs \$9.80. Leo buys 2 and pays with \$20.00. How much change does he get?

A \$1.40
B \$10.20
C \$0.40
D \$0.60

- 21 A 2 liter jug is poured into 250 mL cups. How many cups can be filled?

A 4
B 8
C 80
D 10

22 A class ends at 3:10 p.m. and lasted 1 hour 45 minutes. What time did it start?

A 1:35 p.m.

B 4:55 p.m.

C 1:15 p.m.

D 1:25 p.m.

23 A ribbon is 2 yards long. Pieces of 8 inches are cut from it. How many pieces can be cut?

A 6

B 8

C 9

D 12

24 Nia has \$20. She buys 3 notebooks at \$2.25 each and a pen for \$4.00. How much does she have left?

A \$9.25

B \$10.75

C \$13.75

D \$6.25

ANSWER KEY & EXPLANATIONS

- 1 C** 1 m = 100 cm, so $6 \times 100 = 600$.
-
- 2 A** 1 kg = 1,000 g.
-
- 3 D** $2 \times 60 = 120$.
-
- 4 B** Line up the decimals: $2.75 + 4.00 = 6.75$.
-
- 5 A** 1 foot = 12 inches.
-
- 6 C** $3 + 2 = 5$, still in the afternoon.
-
- 7 B** $2,000 + 400 = 2,400$.
-
- 8 D** $600 + 79 = 679$.
-
- 9 A** $3:20 + 1 \text{ h} = 4:20$, + 35 min = 4:55.
-
- 10 C** $2 \times \$2.75 = \5.50 . $\$5.50 + \$4.00 = \$9.50$.
-
- 11 D** 1 kg 250 g = 1,250 g, which is less than 1,500 g.
-
- 12 B** $5 \times 12 = 60$, plus 3 = 63.
-
- 13 C** $90 \div 15 = 6$.
-
- 14 A** $3 \times 60 = 180$, plus 20 = 200.
-
- 15 B** $600 \div 40 = 15$.
-
- 16 D** $6:45 + 4 \text{ h} = 10:45$. Then 15 min to 11:00 and 20 more to 11:20.
-
- 17 D** $2 \times \$7.50 = \15.00 . $\$20.00 - \$15.00 = \$5.00$.
-
- 18 B** $3,000 + 50 = 3,050$. The zero in the hundreds place matters.
-
- 19 A** 10 min to 9:00, 4 h to 1:00, 15 min to 1:15. 4 h 25 min.
-
- 20 C** $2 \times \$9.80 = \19.60 . $\$20.00 - \$19.60 = \$0.40$.
-
- 21 B** 2 L = 2,000 mL. $2,000 \div 250 = 8$.
-
- 22 D** Back 1 hour: 2:10. Back 45 minutes: 1:25.
-
- 23 C** 2 yards = 6 feet = 72 inches. $72 \div 8 = 9$.
-
- 24 A** $3 \times \$2.25 = \6.75 . $\$6.75 + \$4.00 = \$10.75$. $\$20.00 - \$10.75 = \$9.25$.
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