

SIGMABUDGIE · GRADE 3

Time & Measurement

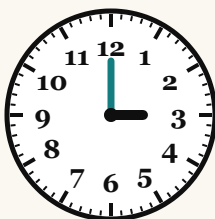
A gentle walkthrough & a 24-question exam

Part 1 walks through telling time, elapsed time, and measuring 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 two hands

The **short** hand tells the hour. The **long** hand tells the minutes. When the long hand points straight up at 12, it is exactly **o'clock**.

When the long hand points at 6, it is **half past**: 30 minutes. Notice the short hand has moved halfway between 3 and 4.



3:00, three o'clock



3:30, half past three

2 · Counting by fives

Each big number on the clock is **5 minutes** for the long hand. Count around: 5, 10, 15, 20...

The long hand points at 4, so count 5, 10, 15, **20**. The short hand is just past 7. The time is **7:20**.



7:20

3 · To the minute

The small marks between the numbers are single minutes. Count by fives to the last big number, then count the small marks one at a time.

Long hand: past the 4 (20) by 3 small marks = **23**. Short hand: past 7. The time is **7:23**.



7:23

4 • a.m. and p.m.

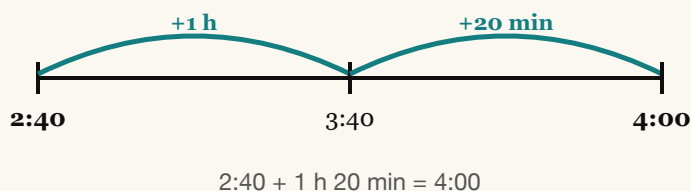
The clock goes around twice a day. From midnight to noon is **a.m.** (morning). From noon to midnight is **p.m.** (afternoon and night).

7:30 a.m. is breakfast time. 7:30 p.m. is bedtime-story time. Same clock, different half of the day.

5 • Elapsed time: hop along a number line

Elapsed time is how much time passed. Hop in easy pieces: whole hours first, then minutes.

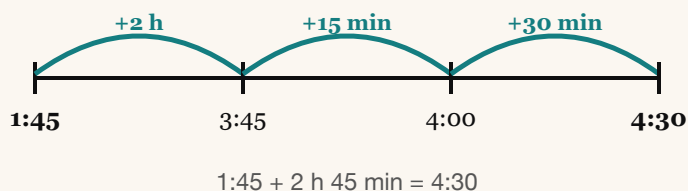
Start at 2:40 and go 1 hour 20 minutes. Hop 1 hour to 3:40, then 20 minutes to **4:00**.



6 • Finding the end time

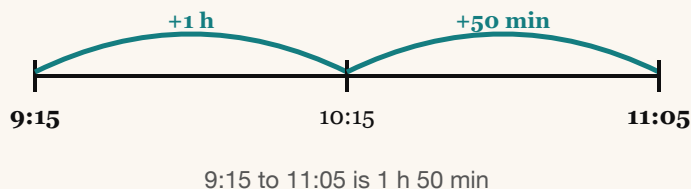
Soccer starts at 1:45 and lasts 2 hours 45 minutes. Hop 2 hours: 3:45. Hop 15 minutes to the next hour: 4:00. Hop the last 30 minutes: **4:30**.

Breaking the minutes at the hour keeps you from going past 60.



7 • How long did it take?

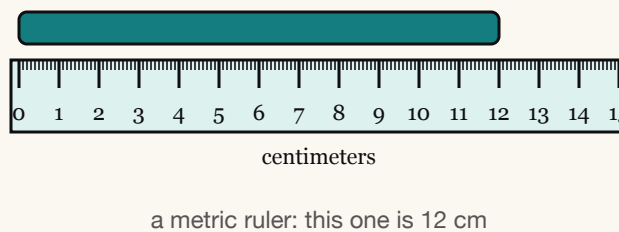
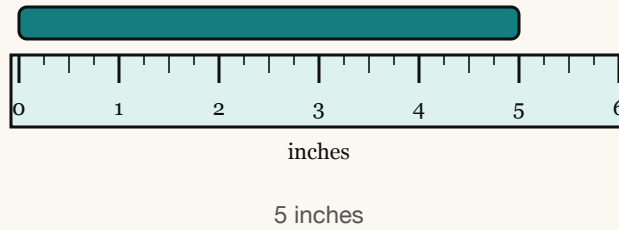
Now the start and end are known. From 9:15 to 11:05: hop to 10:15 (1 h), then 11:05 is 50 minutes more. Total **1 hour 50 minutes**.



8 • Length: inches and centimeters

Line the object up with **0** on the ruler and read where it ends. This pencil is **5 inches** long.

The small marks split each inch into halves and quarters, just like a line plot.



9 • Picking the right unit

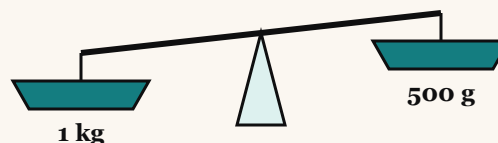
Small things: **inches** or **centimeters** (a paper clip is about 3 cm). Medium things: **feet** or **meters** (a door is about 7 feet, or 2 meters). Long distances: **miles** or **kilometers**.

If the answer would be a huge number, pick a bigger unit.

10 • Weight: grams, kilograms, ounces, pounds

A paper clip weighs about **1 gram**. A textbook weighs about **1 kilogram** (1,000 grams). A slice of bread is about **1 ounce**; a loaf is about **1 pound** (16 ounces).

A balance tips toward the heavier side. 1 kilogram beats 500 grams.

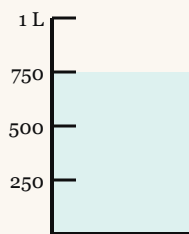


the heavier side goes down

11 · Liquids: milliliters and liters

A spoonful is about **5 milliliters**. A big water bottle is **1 liter**, which is 1,000 milliliters.

This jug is filled to **750 mL**, three quarters of a liter.



750 mL

12 · Converting units

Some facts to keep in your pocket: **1 foot = 12 inches**, **1 yard = 3 feet**, **1 meter = 100 cm**, **1 kilogram = 1,000 g**, **1 liter = 1,000 mL**, **1 hour = 60 minutes**.

2 feet = $2 \times 12 = 24$ inches. **3 hours = $3 \times 60 = 180$ minutes**. 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 What time does the clock show?



- A 12:15 B 3:00
C 3:30 D 12:03

- 2 What time does the clock show?

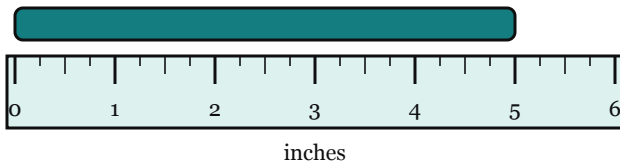


- A 7:04 B 4:35
C 8:20 D 7:20

- 3 How many minutes are in 1 hour?

- A 60 B 100
C 30 D 12

- 4 How long is the pencil?



- A 6 inches B 4 inches
C 5 inches D 5 cm

5 Breakfast is at 7:30 in the morning. Which is the correct way to write it?

A 7:30 p.m.

B 7:30 noon

C 19:30

D 7:30 a.m.

6 A show starts at 2:00 and lasts 30 minutes. What time does it end?

A 3:00

B 2:30

C 2:03

D 1:30

7 What time does the clock show?



A 7:23

B 7:20

C 4:37

D 7:27

8 Which unit is best for measuring the height of a door?

A inches

B miles

C feet

D ounces

9 How many centimeters are in 1 meter?

A 10

B 100

C 1,000

D 12

10 Art class starts at 4:15 and lasts 1 hour 20 minutes. What time does it end?

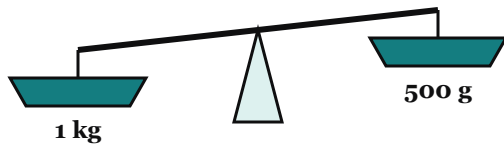
A 5:15

B 5:20

C 6:35

D 5:35

11 Which is heavier?



A 500 grams

B They weigh the same

C 1 kilogram

D You cannot tell

12 Which unit is best for measuring the water in a bathtub?

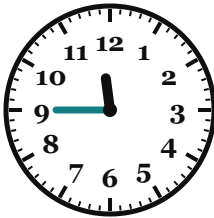
A liters

B milliliters

C grams

D centimeters

13 What time does the clock show?



A 12:45

B 9:55

C 11:09

D 11:45

14 2 feet = ? inches

A 12

B 24

C 20

D 2

15 Soccer practice starts at 1:45 p.m. and lasts 2 hours 45 minutes. What time does it end?

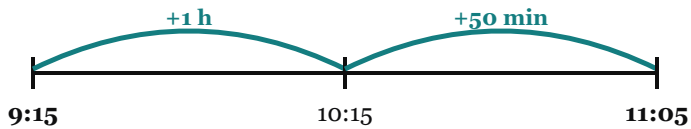
A 3:90 p.m.

B 4:00 p.m.

C 4:30 p.m.

D 3:30 p.m.

- 16 A movie starts at 9:15 and ends at 11:05. How long is the movie?

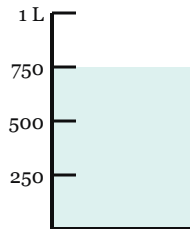


- A 1 hour 50 minutes B 2 hours 10 minutes
C 1 hour 10 minutes D 2 hours

- 17 3 hours = ? minutes

- A 180 B 300
C 90 D 120

- 18 How much liquid is in the jug?



- A 75 mL B 1 L
C 750 mL D 500 mL

- 19 A lesson lasts 45 minutes and ends at 3:10. What time did it start?

- A 3:55 B 2:35
C 2:15 D 2:25

- 20 Which is the best estimate for the weight of a bicycle?

- A 10 grams B 10 kilograms
C 100 kilograms D 1 gram

- 21 School starts at 8:10 a.m. Lunch is at 12:00 noon. How long is it from the start of school until lunch?

- A 4 hours 10 minutes B 3 hours 10 minutes
C 3 hours 50 minutes D 4 hours 50 minutes

22 Which is the same as 90 minutes?

A 1 hour 30 minutes

B 1 hour 90 minutes

C 2 hours

D 1 hour 10 minutes

23 A movie starts at 6:50 p.m. and lasts 1 hour 35 minutes. What time does it end?

A 7:85 p.m.

B 8:25 p.m.

C 8:15 p.m.

D 7:25 p.m.

24 A rope is 2 yards long. How many inches is that?

A 24

B 36

C 6

D 72

ANSWER KEY & EXPLANATIONS

- 1 B** Short hand on 3, long hand on 12: three o'clock.
- 2 D** Long hand on 4 means 20 minutes. Short hand is past 7. 7:20.
- 3 A** One hour is 60 minutes.
- 4 C** It starts at 0 and ends at the 5 on an inch ruler.
- 5 D** Morning times, from midnight to noon, are a.m.
- 6 B** 2:00 plus 30 minutes is 2:30.
- 7 A** Long hand is 3 small marks past the 4: $20 + 3 = 23$ minutes.
- 8 C** A door is about 7 feet tall. Inches would be a big number, and miles are far too big.
- 9 B** 1 meter = 100 centimeters.
- 10 D** Hop 1 hour to 5:15, then 20 minutes to 5:35.
- 11 C** 1 kilogram is 1,000 grams, which is more than 500 grams.
- 12 A** A bathtub holds many liters. Milliliters would be a huge number.
- 13 D** Long hand on 9 is 45 minutes. Short hand is almost at 12 but not there yet, so the hour is 11.
- 14 B** 1 foot is 12 inches, so 2 feet is $2 \times 12 = 24$ inches.
- 15 C** $1:45 + 2 \text{ h} = 3:45$. Then 15 min to 4:00 and 30 more to 4:30.
- 16 A** 9:15 to 10:15 is 1 hour. 10:15 to 11:05 is 50 minutes.
- 17 A** $3 \times 60 = 180$ minutes.
- 18 C** The liquid reaches the third mark: 250, 500, 750 mL.
- 19 D** Count back from 3:10: 10 minutes to 3:00, then 35 more to 2:25.
- 20 B** A bicycle is about 10 kg. 10 grams is a few paper clips; 100 kg is a very large adult.
- 21 C** 8:10 to 11:10 is 3 hours. 11:10 to 12:00 is 50 minutes.
- 22 A** 60 minutes is 1 hour, and 30 are left: 1 hour 30 minutes.
- 23 B** $6:50 + 1 \text{ h} = 7:50$. Then 10 min to 8:00 and 25 more to 8:25.
- 24 D** 1 yard is 3 feet, so 2 yards is 6 feet. $6 \times 12 = 72$ inches.