



Math Foundations 3

TESTS MASTERY OF MATH FOUNDATIONS 2 • 20 ITEMS • 45-60 MINUTES • NO CALCULATOR

This diagnostic probes whether multiplication, division and early fraction thinking are secure enough to carry larger numbers, equivalence and measurement. Several items deliberately separate students who can carry out a procedure from those who can say when it applies. Gaps found here are repaired inside the ordinary flow of the week.

BEFORE YOU BEGIN

Work without a calculator. Drawings, tallies, number lines and jottings are all welcome - we want to see thinking, not just answers.

If a question is unfamiliar, leave it blank rather than guessing. A blank tells us more than a guess does.

An adult may read questions aloud, but should not explain the mathematics or hint at a method.

There is no time limit that matters. If a student is tired, stop and finish later.

SECTION A Multiple choice

10 items

Choose one answer. If you are unsure, leave it blank rather than guessing.

01 Which number sentence belongs with $6 \times 7 = 42$?

- A) $42 - 7 = 35$
- B) $42 \div 7 = 6$
- C) $6 + 7 = 13$
- D) $42 \times 6 = 252$

02 Which fraction is closest to 1?

- A) $\frac{1}{2}$
- B) $\frac{7}{8}$
- C) $\frac{1}{8}$
- D) $\frac{2}{3}$

03 Which fraction is largest?

- A) $\frac{1}{8}$
- B) $\frac{1}{3}$
- C) $\frac{1}{10}$
- D) $\frac{1}{5}$



- 04** What is 367 rounded to the nearest hundred?
- A) 300
 - B) 360
 - C) 400
 - D) 370
- 05** A rectangle is 5 squares long and 3 squares wide. How many squares cover it?
- A) 15
 - B) 30
 - C) 16
 - D) 8
- 06** A film starts at 2:40 and lasts 35 minutes. What time does it end?
- A) 2:75
 - B) 2:15
 - C) 3:75
 - D) 3:15
- 07** Ama buys 4 books costing \$3 each and pays with \$20. How much change does she get?
- A) \$12
 - B) \$16
 - C) \$8
 - D) \$32
- 08** On a bar chart each square stands for 5 children. One bar is 4 squares tall. How many children does it show?
- A) 4
 - B) 45
 - C) 20
 - D) 9
- 09** What is 47×10 ?
- A) 57
 - B) 4710
 - C) 470
 - D) 407



10 28 children sit 6 to a table. How many tables are needed?

- A) 4 remainder 4
- B) 4
- C) 34
- D) 5

SECTION B Student solving

6 items

Show your working. We are reading the method, not only the answer.

11 Work out 6×8 . Then use it to work out 6×80 , and explain the link between them.

12 Ama has 35 sweets to share equally between 4 friends. How many does each friend get, and how many are left over? Show your working.



- 13** Draw a rectangle with an area of 12 squares. Then draw a different rectangle with the same area. Give the perimeter of each.

- 14** Write three fractions that are equal to one half. Explain how you know they are equal.

- 15** A shop opens at 8:45 in the morning and closes at 1:15 in the afternoon. How long is it open? Show your working.



- 16** Kofi says 4×25 is easy because it is the same as $25 + 25 + 25 + 25$. Work it out his way, then work it out a different way.

SECTION C Error analysis

4 items

Each shows work containing a mistake. Find the FIRST incorrect step, say what the student believed, and give the correct answer.

- 17** Find Esi's mistake. Say what she believed, then give the correct answer.

Which is bigger, $\frac{1}{3}$ or $\frac{1}{5}$?
Esi wrote: $\frac{1}{5}$ is bigger
because 5 is bigger than 3

- 18** Find Kwame's mistake and give the correct answer.

Round 367 to the nearest hundred.
Kwame wrote: 300
because the hundreds digit is 3

- 19** Find the first incorrect step and correct it.

47×10
Ama wrote: 407

- 20** Find Kofi's mistake and say what he should have answered.

28 children sit 6 to a table.
Kofi wrote: $28 \div 6 = 4$ remainder 4
Kofi's answer: 4 tables

What happens next

Bring this completed sheet to your consultation. A tutor reads it alongside a short conversation with the student and any school work you choose to share, then recommends a level. No placement is ever decided by a score on its own, and no student is placed without a tutor's approval.