

Grade 4 math syllabus (USA): the five domains and every skill

The Common Core grade 4 year in the order schools teach it. Tick a skill when the child can do it without help; the fluency for the year is multi-digit addition and subtraction.

Domain	Skills	Done
1. Base ten (10 weeks)	Place value to 1,000,000; the ten-times relationship; compare and round to any place; add and subtract multi-digit with the standard algorithm; multiply 3- or 4-digit by 1-digit and 2-digit by 2-digit (area model, partial products); divide up to 4-digit by 1-digit with remainders	[]
2. Operations and algebraic thinking (5)	Multiplicative comparison; multi-step word problems with a letter for the unknown; interpret remainders; factors and multiples to 100; prime and composite; patterns with a rule	[]
3. Fractions (10)	Equivalent fractions; compare with different numerators and denominators; decompose; add and subtract like denominators and mixed numbers; multiply a fraction by a whole number; tenths and hundredths as decimals; compare decimals to hundredths	[]
4. Measurement and data (6)	Units within a system (km m cm, kg g, lb oz, l ml, h min s); word problems with distance, time, volume, mass, money; area and perimeter formulas; line plots with fractions; angles as parts of a circle; protractor; adding angles	[]
5. Geometry (3)	Points, lines, segments, rays, angles (right, acute, obtuse); perpendicular and parallel; classify shapes by lines and angles; right triangles; lines of symmetry	[]

The year, the test, and the end-of-year check

Month by month

Months	Domain	Check at home
Aug to Sep	Place value, rounding, add and subtract	Reads 3,407,215; rounds 46,318 to 46,000
Oct to Nov	Multiplication; multiplicative comparison	328×6 and 24×37 with working; '6 times as many' as $6 \times n$
Dec to Jan	Division with remainders; factors, multiples, primes	$1,254 \div 6 = 209$; factors of 36; 37 is prime
Feb to Mar	Fractions and decimals	$\frac{3}{4} = \frac{6}{8}$ explained; $\frac{2}{3}$ vs $\frac{3}{5}$; $3 \times \frac{2}{5} = 1 \frac{1}{5}$; $0.4 = \frac{40}{100}$
April	Measurement, data, angles	3 km = 3,000 m; 2 h = 120 min; measures 65° ; perimeter of 7 by 4
May	Geometry; review; state test	Classifies a shape by angles and parallel sides; lines of symmetry

The state test

Test	Note
Every state, spring	Federal law requires a math test in grades 3 to 8
Texas STAAR grade 4 math	40 points: 17 to pass (Approaches), 24 for Meets, 31 for Masters
Florida FAST, California CAASPP, New York, MCAS	Same five domains; fractions and multi-step word problems carry the most marks

Twelve questions, no calculator, fifteen minutes

- Write 2,305,019 in words
- Round 847,562 to the nearest ten thousand
- $60,342 - 28,795$
- $1,274 \times 8$
- 46×32
- $2,538 \div 7$, with remainder
- All factors of 48; is 51 prime?
- Larger: $\frac{5}{8}$ or $\frac{3}{5}$? Show how
- $2 \frac{3}{4} + 1 \frac{3}{4}$
- $4 \times \frac{3}{8}$ as a mixed number
- 0.35 as a fraction over 100; compare 0.35 and 0.4
- Rectangle 9 cm by 4 cm: perimeter and area; 3 km 250 m in metres

Answers

1) Two million, three hundred five thousand, nineteen 2) 850,000 3) 31,547 4) 10,192 5) 1,472 6) 362 r 4 7) 1, 2, 3, 4, 6, 8, 12, 16, 24, 48; $51 = 3 \times 17$ 8) $\frac{5}{8}$ ($\frac{25}{40}$ vs $\frac{24}{40}$) 9) $4 \frac{1}{2}$ 10) $1 \frac{1}{2}$ 11) $\frac{35}{100}$; $0.35 < 0.4$ 12) 26 cm, 36 cm²; 3,250 m
10 or more: ready for grade 5. 7 to 9: the missed questions name the summer work. 6 or fewer, or 4 to 6 wrong: the multiplication facts are not automatic; fix that first.

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