



IXL Skill Plan for the ACT[®] Aspire 4th grade



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Emerging

Operations and Algebraic Thinking

| Standard | IXL skills |
|---|---|
| Solve two-step problems | 1. Perform multiple operations with whole numbers UKB |
| Describe and extend shape patterns | <p>Repeating patterns</p> <ol style="list-style-type: none"> Find the next shape in a pattern KG8 Complete a repeating pattern FNW Make a repeating pattern V68 <p>Growing patterns</p> <ol style="list-style-type: none"> Find the next row in a growing pattern of shapes JZP |

Number and Operations in Base Ten

| Standard | IXL skills |
|--|---|
| Round whole numbers within 100,000 | 1. Rounding KMD |
| Multiply one-digit numbers by two-digit numbers | <ol style="list-style-type: none"> Multiply 1-digit numbers by teen numbers using grids 8UH Multiply 1-digit numbers by 2-digit numbers using area models II HZX Multiply 1-digit numbers by 2-digit numbers GDW |
| Convert between place value models and numerals for whole numbers | 1. Place value models 2Y7 |

Number and Operations - Fractions

| Standard | IXL skills |
|--|--|
| Add and subtract fractions with like denominators | <p>Add fractions</p> <ol style="list-style-type: none"> Add fractions with like denominators using area models Y5W |

- Add fractions with like denominators using number lines [6QH](#)
- Add fractions with like denominators [PDU](#)

Subtract fractions

- Subtract fractions with like denominators using area models [P99](#)
- Subtract fractions with like denominators using number lines [MJX](#)
- Subtract fractions with like denominators [AVF](#)

Compare decimals using models

- Compare decimals using models [CV7](#)
- Compare decimals on number lines [T2W](#)

Measurement and Data

Standard

IXL skills

Use line plots to answer questions

- Interpret line plots [G8K](#)

Select appropriate measuring tools

- Choose the appropriate measuring tool [FTA](#)

Geometry

Standard

IXL skills

Identify points, lines, line segments, rays, and angles

- Points, lines, line segments, rays, and angles [9MK](#)

Modeling

Standard

IXL skills

Recognize lines of symmetry

- Identify lines of symmetry [9FD](#)

Use place value blocks to solve problems

- Use models to add three-digit numbers: with regrouping [NWW](#)

Add and subtract whole numbers on number lines

- Addition and subtraction sentences using number lines: up to 20 [GKS](#)

Justification and Explanation

| Standard | IXL skills |
|---|---|
| Restate problems and supply reasoning statements that are true but not effective | |
| Provide examples, computations, and steps in procedures | 1. Choose numbers with a particular sum, difference, product, or quotient X9G |
| State properties, definitions, or relationships | <p>Properties of operations</p> <p>1. Properties of addition D9R</p> <p>2. Properties of multiplication B6N</p> <p>Geometric relationships</p> <p>3. Parallel, perpendicular, and intersecting lines 8VQ</p> <p>4. Parallel sides in quadrilaterals 58M</p> |
| Draw conclusions from single statements | 1. Use one multiplication fact to complete another W6D |

Integrating Essential Skills

| Standard | IXL skills |
|---|---|
| Use models to multiply up to 12 x 12 | <p>1. Write multiplication equations for arrays 2KB</p> <p>2. Make arrays to model multiplication HQK</p> <p>3. Write multiplication sentences for number lines 77W</p> |
| Match fractions and models | 1. Fractions review YPL |
| Recognize polygons | 1. Identify two-dimensional shapes JBT |
| Recognize patterns | <p>1. Find the next shape in a pattern KG8</p> <p>2. Find the next row in a growing pattern of shapes JZP</p> |
| Use place value models | 1. Place value models 2Y7 |

Recall basic facts

1. Addition, subtraction, multiplication, and division facts 7RF
2. Multiplication facts to 12 FW9
3. Division facts to 12 R95

Measure objects and create data

1. Measure using an inch ruler LC2
2. Measure using a centimeter ruler AAE

Choose appropriate tools to solve problems**Whole number multiplication**

1. Multiply 1-digit numbers by 2-digit numbers using area models I VCM

Fraction addition

2. Add fractions with like denominators using strip models Z63
3. Add fractions with like denominators using number lines 6QH

Fraction subtraction

4. Subtract fractions with like denominators using strip models QAS
5. Subtract fractions with like denominators using number lines MJX

Close

Operations and Algebraic Thinking

| Standard | IXL skills |
|--|--|
| Recognize prime and composite numbers | <ol style="list-style-type: none"> 1. Prime and composite: up to 20 TNF 2. Prime and composite: up to 100 L9R |
| Describe and extend number patterns | <p>Complete a pattern</p> <ol style="list-style-type: none"> 1. Complete an increasing number pattern QHB 2. Complete a geometric number pattern SZJ 3. Number patterns: mixed review E77 <p>Describe a pattern</p> <ol style="list-style-type: none"> 4. What is true about the given pattern? C9H 5. What is true about the pattern made by the rule? 35J |

Number and Operations in Base Ten

| Standard | IXL skills |
|--|--|
| Convert between number names and numerals | <ol style="list-style-type: none"> 1. Writing numbers up to 100,000 in words: convert words to digits SQQ 2. Writing numbers up to 100,000 in words: convert digits to words 2RZ |
| Multiply one-digit numbers by three-digit numbers | <ol style="list-style-type: none"> 1. Multiply 1-digit numbers by 3-digit numbers W9X |
| Use place value to identify the value of digits within 100,000 | <ol style="list-style-type: none"> 1. Value of a digit: up to 100,000 27X |
| Relate repeated addition and subtraction to multiplication and division | <ol style="list-style-type: none"> 1. Relate addition and multiplication P74 2. Divide using repeated subtraction CCY |

Number and Operations - Fractions

| Standard | IXL skills |
|--|---|
| Add and subtract fractions with like denominators | <ol style="list-style-type: none"> Add and subtract fractions with like denominators FXD Add and subtract fractions with like denominators: word problems XBR Add and subtract fractions with like denominators in recipes LYR |

Measurement and Data

| Standard | IXL skills |
|---|--|
| Solve problems involving quadrilaterals | <ol style="list-style-type: none"> Draw quadrilaterals L5Y Find the perimeter of rectangles using formulas KGJ |
| Match line plots to data and create line plots from data | <ol style="list-style-type: none"> Create line plots GNT |
| Use an inch ruler to measure within 1/2 inch | <ol style="list-style-type: none"> Measure using an inch ruler LC2 |

Geometry

| Standard | IXL skills |
|--|---|
| Identify parallel and perpendicular lines | <ol style="list-style-type: none"> Parallel, perpendicular, and intersecting lines 8VQ |

Modeling

| Standard | IXL skills |
|--|---|
| Identify lines of symmetry and relationships between angles | <ol style="list-style-type: none"> Identify lines of symmetry 9FD |
| Use models to solve a real-world problems | |
| Use place value blocks to solve fraction and decimal problems | <ol style="list-style-type: none"> What decimal number is illustrated? B7E Model decimals and fractions TPV |

Justification and Explanation

| Standard | IXL skills |
|---|--|
| Provide partially effective explanations | |
| Explain patterns | <ol style="list-style-type: none"> 1. Multiplication input/output tables: find the rule KQG 2. What is true about the given pattern? C9H |
| Use rules to complete patterns | <ol style="list-style-type: none"> 1. Use a rule to complete a number pattern 5P2 |
| Use conditional statements | <ol style="list-style-type: none"> 1. Relate multiplication and division: up to 100 VR8 |
| Create visual representations | <ol style="list-style-type: none"> 1. Multiply 1-digit numbers by 3-digit or 4-digit numbers using area models I RP9 2. Multiply 1-digit numbers by 3-digit or 4-digit numbers using area models II WKL 3. Add and subtract fractions with like denominators using number lines GAK |
| Explain procedures | |
| Provide counterexamples | |
| Support arguments | <ol style="list-style-type: none"> 1. What is true about the pattern made by the rule? 35J |

Integrating Essential Skills

| Standard | IXL skills |
|---|--|
| Multiply up to 12 x 12 | <ol style="list-style-type: none"> 1. Multiplication facts to 12 FW9 |
| Relate denominators and the size of fractional parts | <ol style="list-style-type: none"> 1. Fractions review YPL |
| Record unit fractions | <ol style="list-style-type: none"> 1. Unit fractions: word problems HM7 |
| Compare fractions | <ol style="list-style-type: none"> 1. Compare fractions with like numerators or denominators using models Q87 |

2. Graph and compare fractions with like numerators or denominators on number lines 9XF
3. Compare fractions with like numerators or denominators M8E

Solve one-step word problems

1. Addition, subtraction, multiplication, and division word problems QKS

Identify the value of a digit

1. Value of a digit WLP

Make rectangular arrays

1. Make arrays to model multiplication HQK

Solve real-world measurement problems

1. Measurement word problems 2PY
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Ready

Operations and Algebraic Thinking

| Standard | IXL skills |
|--|--|
| Solve problems that include prime numbers, factors, and multiples | <p>Prime numbers</p> <ol style="list-style-type: none"> 1. Prime and composite: up to 100 L9R <p>Multiples</p> <ol style="list-style-type: none"> 2. Choose the multiples of a given number up to 12 ENC <p>Factors</p> <ol style="list-style-type: none"> 3. Multiplication facts up to 12: find the missing factor 76F 4. Find all the factor pairs of a number URL |
| Use number patterns to solve real-world problems | <ol style="list-style-type: none"> 1. Number patterns: word problems C62 |
| Make sense of multi-step problems with whole numbers | <ol style="list-style-type: none"> 1. Multi-step word problems with strip diagrams CZQ 2. Use strip diagrams to represent and solve multi-step word problems G8Z |
| Demonstrate understanding of the meaning of quantities | <ol style="list-style-type: none"> 1. Compare customary units by multiplying 8U7 |

Number and Operations in Base Ten

| Standard | IXL skills |
|---|---|
| Multiply whole numbers | <ol style="list-style-type: none"> 1. Multiply 1-digit numbers by 3-digit or 4-digit numbers PPM 2. Multiply a 2-digit number by a 2-digit number: complete the missing steps XQ8 3. Multiply a 2-digit number by a 2-digit number MLC |
| Understand place value of whole numbers within 100,000 | <ol style="list-style-type: none"> 1. Relationship between place values KFD 2. Convert between place values: up to hundred thousands D7G |

Write whole numbers in expanded form using addition

1. Convert between standard and expanded form M5V

Apply the distributive property

1. Distributive property: find the missing factor US7
2. Multiply using the distributive property LXG

Estimate to check solutions
Sums and differences

1. Estimate sums VMD
2. Estimate differences QJY

Products and quotients

3. Estimate products: multiply by 1-digit numbers WDG
4. Estimate products: multiply by 2-digit numbers 2TR
5. Estimate quotients using compatible numbers: 1-digit divisors CWE

Word problems

6. Estimate sums, differences, products, and quotients: word problems CRD

Number and Operations - Fractions

Standard
IXL skills
Compare decimals

1. Compare decimals between 0 and 1 YTY

Add and subtract mixed numbers with like denominators

1. Add and subtract mixed numbers with like denominators 9AS
2. Add and subtract mixed numbers with like denominators: word problems 6KM

Use models to find equivalent fractions

1. Find equivalent fractions using area models HYC
2. Graph equivalent fractions on number lines WQL

Use comparison symbols appropriately
Whole numbers

1. Inequalities involving addition, subtraction, multiplication, and division 95Y

Decimals

2. Compare money amounts EAL

Fractions

3. Compare fractions with like numerators or denominators M8E

Compose and decompose mixed numbers

Write mixed numbers

1. Identify mixed numbers UX6

Decompose fractions

2. Decompose fractions into unit fractions XHG
3. Decompose fractions N2Z
4. Decompose fractions multiple ways UEW

Measurement and Data

| Standard | IXL skills |
|---|---|
| Measure and compare angles using a protractor | 1. Measure angles with a protractor NCN |
| Convert measurements in fractional amounts | 1. Convert customary units involving fractions 8CD |
| Construct line plots with fractions | 1. Create and interpret line plots with fractions QQB |
| Measure with appropriate precision | 1. Measure using an inch ruler EDW 2. Measure angles with a protractor NCN |

Geometry

| Standard | IXL skills |
|--|--|
| Use parallel sides to classify figures | 1. Classify quadrilaterals A6V |
| Identify acute, right, and obtuse angles | 1. Acute, right, and obtuse angles W6Z |
| Understand lines of symmetry | 1. Draw lines of symmetry SQF |

Modeling

| Standard | IXL skills |
|--|---|
| Recognize two-dimensional figures | <ol style="list-style-type: none"> 1. Identify parallelograms DJ9 2. Identify trapezoids 9MJ 3. Identify rectangles GHH 4. Identify rhombuses KUU 5. Which shape is being described? NLG |
| Determine appropriate models | |
| Use area models to multiply | <p>Multiply 1-digit numbers</p> <ol style="list-style-type: none"> 1. Multiply 1-digit numbers by 3-digit or 4-digit numbers using area models I RP9 2. Multiply 1-digit numbers by 3-digit or 4-digit numbers using area models II WKL <p>Multiply 2-digit numbers</p> <ol style="list-style-type: none"> 3. Multiply 2-digit numbers by 2-digit numbers using area models I ASZ 4. Multiply 2-digit numbers by 2-digit numbers using area models II 8K7 |

Justification and Explanation

| Standard | IXL skills |
|---|---|
| Support claims and draw conclusions | <ol style="list-style-type: none"> 1. Estimate products word problems: identify reasonable answers KLA 2. Divide by 1-digit numbers: pick the better estimate 2FS 3. Multi-step word problems: identify reasonable answers K6X |
| Draw conclusions from conditional statements, models, computations, and procedures | <ol style="list-style-type: none"> 1. Parallel sides in quadrilaterals 58M 2. Pick all the names for a quadrilateral 6CT |
| Justify conclusions by verifying claims, explaining errors in reasoning, and providing counterexamples | <ol style="list-style-type: none"> 1. Identify mistakes in number patterns PFV |

Integrating Essential Skills

| Standard | IXL skills |
|---|--|
| Solve multi-step problems from the previous grade | <ol style="list-style-type: none"> Two-step mixed operation word problems SRL Two-step word problems: identify reasonable answers V5A |
| Identify and explain equal-sized parts of a whole | <ol style="list-style-type: none"> Identify equal parts FHY Make halves, thirds, fourths, sixths, and eighths JHE |
| Connect arrays to area, multiplication, and division | <p>Multiplication and division</p> <ol style="list-style-type: none"> Make arrays to model multiplication HQK Write division sentences for arrays 8QG Relate multiplication and division for arrays CKG <p>Area</p> <ol style="list-style-type: none"> Create rectangles with a given area BMV |
| Solve two-step word problems with whole numbers | <ol style="list-style-type: none"> Two-step mixed operation word problems KJJ |
| Create number sentences to represent problems | <ol style="list-style-type: none"> Write numerical expressions: one operation 2NK |

Exceeding

Operations and Algebraic Thinking

| Standard | IXL skills |
|---|--|
| Solve problems involving prime numbers, factors, and multiples | <p>Prime numbers</p> <ol style="list-style-type: none"> 1. Prime and composite: up to 100 L9R <p>Multiples</p> <ol style="list-style-type: none"> 2. Choose the multiples of a given number up to 12 ENC <p>Factors</p> <ol style="list-style-type: none"> 3. Multiplication facts up to 12: find the missing factor 76F 4. Find all the factor pairs of a number URL |
| Solve multi-step word problems with whole numbers | <ol style="list-style-type: none"> 1. Multi-step word problems involving subtraction 68Y 2. Multi-step word problems EA9 3. Multi-step word problems involving remainders SLS |
| Begin to solve problems involving whole numbers, fractions, and decimals | <ol style="list-style-type: none"> 1. Find the change, price, or amount paid RTE 2. Price lists with addition and subtraction 92H 3. Measurement word problems with fractions UST |
| Fluently translate between verbal descriptions and mathematical expressions and equations in real-world problems | <ol style="list-style-type: none"> 1. Comparison word problems: addition or multiplication? YCW 2. Write variable expressions: word problems KPS 3. Write variable equations to represent word problems 5SJ |

Number and Operations in Base Ten

| Standard | IXL skills |
|---|--|
| Solve multi-step real-world problems | <ol style="list-style-type: none"> 1. Multi-step word problems involving subtraction 68Y 2. Multi-step word problems EA9 |

3. Multi-step word problems involving remainders SLS

Write whole numbers in expanded form with addition and multiplication

1. Convert between standard and expanded form M5V

Number and Operations - Fractions

Standard

IXL skills

Compare fractions by converting to common denominators

Compare fractions

1. Compare fractions 99U
2. Compare fractions: find the missing numerator or denominator KPU

Find equivalent fractions

3. Equivalent fractions: find the missing numerator or denominator 7CY

Graph on number lines

4. Graph equivalent fractions on number lines WQL
5. Graph and compare fractions on number lines RGV

Compare decimals

1. Compare money amounts EAL

Use decimal notation for fractions

1. Graph fractions as decimals on number lines 2N9
2. Convert fractions and mixed numbers to decimals - denominators of 10 and 100 6P7
3. Convert decimals to fractions and mixed numbers DBF

Measurement and Data

Standard

IXL skills

Solve measurement problems with whole numbers, fractions, and decimals

1. Measurement word problems 2PY
2. Measurement word problems with fractions UST
3. Compare customary units by multiplying 8U7

Use data in line plots

1. Create and interpret line plots with fractions QQB

Use a protractor to solve addition and subtraction problems to find unknown angles

Use a protractor

1. Measure angles with a protractor G5J

Add and subtract to find unknown angles

2. Adjacent angles VJY
3. Angle measures: word problems YUA

Use appropriate tools in multi-step problems

Use models to predict results and compare predictions with data

Geometry

Standard

IXL skills

Use parallel or perpendicular lines to classify shapes

1. Classify quadrilaterals A6V

Identify multiple lines of symmetry

1. Draw lines of symmetry SQF
2. Count lines of symmetry MWS

Modeling

Standard

IXL skills

Use models or diagrams to solve problems

1. Read a table B9R
2. Interpret line plots G8K
3. Interpret frequency charts PKD
4. Use Venn diagrams to solve problems 7PK

Create and use models to solve real-world problems

1. Multi-step word problems with strip diagrams CZQ
2. Use strip diagrams to represent and solve multi-step word problems G8Z

Justification and Explanation

| Standard | IXL skills |
|---|--|
| Support claims with evidence and clear solution paths | 1. Identify mistakes involving the order of operations JLJ |
| Thoroughly justify conclusions by explaining errors in reasoning and providing counterexamples | 1. Identify mistakes in number patterns PFV |

Integrating Essential Skills

| Standard | IXL skills |
|--|---|
| Solve multi-step problems from the previous grade level | <p>Two-step problems</p> <ol style="list-style-type: none"> Two-step mixed operation word problems SRL Two-step word problems: identify reasonable answers V5A <p>Elapsed time</p> <ol style="list-style-type: none"> Elapsed time word problems: find the elapsed time V9D Elapsed time word problems: find the end time 5VC <p>Equivalent fractions</p> <ol style="list-style-type: none"> Find equivalent fractions WMX <p>Perimeter and area</p> <ol style="list-style-type: none"> Perimeter: word problems CLD Find the area of rectangles: word problems 5HA Compare area and perimeter of two figures PMF |
| Compose and decompose complex shapes | 1. Area of complex figures (with all right angles) 38W |