



IXL Skill Plan for the ACT[®] Aspire 6th grade



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Emerging

Ratios and Proportional Relationships

Standard	IXL skills
Use ratios to describe relationships	<ol style="list-style-type: none"> 1. Write a ratio 83K 2. Which model represents the ratio? 66V

The Number System

Standard	IXL skills
Recognize factors and multiples	<p>Factors</p> <ol style="list-style-type: none"> 1. Identify factors BGJ 2. Find all the factor pairs of a number VTM <p>Multiples</p> <ol style="list-style-type: none"> 3. Choose the multiples of a given number PE2
Multiply and divide to solve problems	<ol style="list-style-type: none"> 1. Relate multiplication and division X5X

Expressions and Equations

Standard	IXL skills
Write and evaluate expressions with exponents	<p>Whole number bases</p> <ol style="list-style-type: none"> 1. Write multiplication expressions using exponents TY5 2. Evaluate exponents XDA 3. Write powers of ten with exponents DLL 4. Find the missing exponent or base HC5 <p>Decimal or fractional bases</p> <ol style="list-style-type: none"> 5. Exponents with decimal bases D5D 6. Exponents with fractional bases GEQ
Use repeated reasoning to solve problems with exponents	<ol style="list-style-type: none"> 1. Find the missing exponent or base HC5

Geometry

Standard	IXL skills
Solve problems involving the area of right triangles	1. Area of right triangles Y6A

Statistics and Probability

Standard	IXL skills
Find the range of data sets	1. Calculate range DH2
Use the mean to understand data sets	1. Calculate mean BK7

Modeling

Standard	IXL skills
Represent problems using manipulatives	<p>Ratios</p> <p>1. Which model represents the ratio? 66V</p> <p>Decimals</p> <p>2. What decimal number is illustrated? 42E</p> <p>Percents</p> <p>3. What percentage is illustrated? RHG</p> <p>4. Understanding percents: strip models 5JV</p>

Justification and Explanation

Standard	IXL skills
Explain patterns	1. Division patterns with zeroes CEZ
Generate sequences	1. Use a rule to complete a number sequence RPP
Identify errors in reasoning	
Draw conclusions from two or more statements	<p>1. Guess-and-check word problems 7UN</p> <p>2. Use logical reasoning to find the order MGD</p>

Integrating Essential Skills

Standard	IXL skills
Use models to multiply whole numbers	<ol style="list-style-type: none">1. Multiply 1-digit numbers by 3-digit numbers using area models X8T2. Multiply 2-digit numbers by 2-digit numbers using area models AMJ
Add and subtract fractions and mixed numbers	<ol style="list-style-type: none">1. Add and subtract fractions with like denominators LNY2. Add and subtract mixed numbers with like denominators XHJ
Multiply fractions and whole numbers	<ol style="list-style-type: none">1. Fractions of whole numbers I CGR2. Fractions of whole numbers II RLN
Use sides and angles to understand the properties of geometric figures	<ol style="list-style-type: none">1. Identify and classify polygons YLC
Find the area of rectangles	<ol style="list-style-type: none">1. Area of rectangles and squares BE9
Graph ordered pairs in the first quadrant	<ol style="list-style-type: none">1. Graph points on a coordinate plane AST

Close

Ratios and Proportional Relationships

Standard	IXL skills
Use unit rates to solve problems	1. Unit rates JSZ

The Number System

Standard	IXL skills
Add, subtract, and multiply decimals	<p>Mathematical problems</p> <ol style="list-style-type: none"> Add and subtract decimal numbers 79J Multiply decimals 2WT <p>Real-world problems</p> <ol style="list-style-type: none"> Add, subtract, and multiply decimals: word problems 277
Determine absolute value using number lines	1. Understanding absolute value TLR
Plot points in the third quadrant of the coordinate plane	

Expressions and Equations

Standard	IXL skills
Identify and make sense of equivalent expressions	<ol style="list-style-type: none"> Identify equivalent expressions I KFG Identify equivalent expressions II HTG

Geometry

Standard	IXL skills
Find the volume of rectangular prisms made of unit cubes	1. Volume of rectangular prisms made of unit cubes WG8

Statistics and Probability

Standard	IXL skills
Use models, such as histograms and box plots, to represent data	<ol style="list-style-type: none"> 1. Interpret histograms CBF 2. Box plots E9F

Modeling

Standard	IXL skills
Use manipulatives to interpret a problem	<ol style="list-style-type: none"> 1. Identify equivalent expressions using strip models W5U

Justification and Explanation

Standard	IXL skills
Use conditional statements	<ol style="list-style-type: none"> 1. Relate multiplication and division X5X
Create visual representations	<ol style="list-style-type: none"> 1. Maps with decimal distances J7D
Explain procedures	
Provide counterexamples	
Use patterns to draw conclusions	<ol style="list-style-type: none"> 1. Division patterns with zeroes CEZ
Support claims and draw conclusions	<ol style="list-style-type: none"> 1. Scaling whole numbers by fractions: justify your answer 9YZ

Integrating Essential Skills

Standard	IXL skills
Multiply multi-digit whole numbers	<ol style="list-style-type: none"> 1. Multiply whole numbers ZCL 2. Multiply whole numbers with four or more digits ENZ
Add and subtract fractions and mixed numbers	<ol style="list-style-type: none"> 1. Add and subtract fractions with unlike denominators AWS 2. Add and subtract mixed numbers TPZ

Multiply and divide fractions by whole numbers

1. Fractions of whole numbers I CGR
 2. Fractions of whole numbers II RLN
 3. Divide fractions and whole numbers 9GY
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Ready

Ratios and Proportional Relationships

Standard	IXL skills
Use equivalent ratios and rates and unit rates to solve real-world problems	<p>Equivalent ratios and rates</p> <ol style="list-style-type: none"> Equivalent ratios: word problems RLZ Equivalent rates 9AF <p>Unit rates</p> <ol style="list-style-type: none"> Unit prices with customary unit conversions RW2 <p>Word problems</p> <ol style="list-style-type: none"> Use tape diagrams to solve ratio word problems YMD Compare ratios: word problems 2HT Ratios and rates: word problems ZB9

The Number System

Standard	IXL skills
Divide decimals or fractions	<p>Decimals</p> <ol style="list-style-type: none"> Division with decimal quotients BFR Divide decimals by whole numbers: word problems TWZ <p>Fractions</p> <ol style="list-style-type: none"> Divide fractions and mixed numbers N2B Divide fractions and mixed numbers: word problems WAH
Find common factors and use them to identify equivalent expressions	<ol style="list-style-type: none"> Greatest common factor AMB
Explain properties of negative numbers	
Find the absolute value of integers	<ol style="list-style-type: none"> Absolute value 2YZ

Graph points in all four quadrants

1. Graph points on a coordinate plane VHQ
2. Quadrants F5T

Use integers to describe real-world situations

1. Understanding integers 8EP

Model integers and absolute value on number lines**Integers**

1. Integers on number lines K6J
2. Graph integers on horizontal and vertical number lines 36C

Opposite integers and absolute value

3. Understanding opposite integers X8L
4. Understanding absolute value TLR

Expressions and Equations**Standard****IXL skills****Apply the distributive property**

1. Multiply using the distributive property 2HH

Identify independent and dependent variables in real-world problems

1. Identify independent and dependent variables: word problems 9UJ

Geometry**Standard****IXL skills****Solve problems involving the area of triangles and quadrilaterals****Triangles**

1. Area of triangles C8S

Quadrilaterals

2. Area of parallelograms Y8K
3. Area of trapezoids PKW
4. Area of rhombuses 2QG
5. Area of quadrilaterals 27F

Compound figures

6. Area of compound figures 76U

Real-world problems

7. Area of quadrilaterals and triangles: word problems ULK

Use nets to calculate surface area

1. Nets of three-dimensional figures 8KP

Statistics and Probability

Standard

IXL skills

Calculate mean, median, and mode

1. Calculate mean, median, and mode NKV

Create histograms

1. Create histograms 7NG

Modeling

Standard

IXL skills

Solve problems by using manipulative models

Ratios

1. Use tape diagrams to solve ratio word problems YMD

Fractions

2. Multiply two fractions using models B7P

Area

3. Understanding area of a parallelogram QMU
4. Understanding area of a triangle PLL
5. Understanding area of a trapezoid 42R

Justification and Explanation

Standard

IXL skills

Use conditional statements, visual representations, computations, and procedures

1. Compare ratios: word problems 2HT
2. Write equivalent expressions using properties R8H

Justify conclusions by verifying claims, explaining errors in reasoning, and providing counterexamples

1. Scaling by fractions and mixed numbers H2T
2. Identify mistakes involving the order of operations V46

Integrating Essential Skills

Standard	IXL skills
Multiply fractions and mixed numbers with unlike denominators	<ol style="list-style-type: none">1. Multiply two fractions BNT2. Multiply mixed numbers Z9M
Use properties to classify geometric figures	Two-dimensional figures <ol style="list-style-type: none">1. Classify triangles XM62. Classify quadrilaterals BCV Three-dimensional figures <ol style="list-style-type: none">3. Which figure is being described? WPF
Write and evaluate numerical expressions	<ol style="list-style-type: none">1. Evaluate numerical expressions involving whole numbers MLU

Exceeding

Ratios and Proportional Relationships

Standard	IXL skills
Solve percent problems	<ol style="list-style-type: none"> 1. Percents of numbers and money amounts 8N4 2. Percents of numbers: word problems BBY 3. Find the total given a part and a percent D6L 4. Sale prices 5GH
Compare rates and solve real-world problems involve rates	<ol style="list-style-type: none"> 1. Compare rates: word problems NAF 2. Ratios and rates: word problems ZB9 3. Unit prices UKD

The Number System

Standard	IXL skills
Compare the absolute value of rational numbers	<ol style="list-style-type: none"> 1. Absolute value of rational numbers KGX 2. Inequalities with absolute values W9Z
Find common factors or multiples of whole numbers	<ol style="list-style-type: none"> 1. Greatest common factor AMB 2. Least common multiple NGA
Graph points in all four quadrants on a coordinate plane	<ol style="list-style-type: none"> 1. Graph points on a coordinate plane VHQ 2. Distance between two points A7P
Reason about positive and negative numbers to solve problems	<p>Absolute value</p> <ol style="list-style-type: none"> 1. Absolute value and integers: word problems 9CW <p>Rational numbers</p> <ol style="list-style-type: none"> 2. Compare and order rational numbers: word problems ETK 3. Rational numbers: find the sign V2E <p>Temperature</p> <ol style="list-style-type: none"> 4. Compare temperatures above and below zero UVD

Expressions and Equations

Standard	IXL skills
<p>Represent linear relationships with equations and inequalities, evaluate linear expressions, and solve problems involving one-variable equations</p>	<p>Linear expressions</p> <ol style="list-style-type: none"> Evaluate variable expressions with whole numbers Q8Z Evaluate variable expressions with decimals, fractions, and mixed numbers 49T <p>One-variable equations</p> <ol style="list-style-type: none"> Solve one-step addition and subtraction equations with whole numbers JXM Solve one-step addition and subtraction equations with decimals, fractions, and mixed numbers 5D2 Solve one-step addition and subtraction equations: word problems 35Q <p>Inequalities</p> <ol style="list-style-type: none"> Write inequalities from number lines N99 <p>Two-variable equations</p> <ol style="list-style-type: none"> Write an equation from a graph using a table BCM Write a two-variable equation from a table ZTL Write a two-variable equation 2RE
<p>Solve inequalities and graph solutions</p>	<p>Solve inequalities</p> <ol style="list-style-type: none"> Solutions to inequalities P9N Solve one-step inequalities KRH <p>Graph solutions to inequalities</p> <ol style="list-style-type: none"> Graph inequalities on number lines CXX Graph solutions to one-step inequalities PPC
<p>Use operations to describe the structure of expressions</p>	<p>Write variable expressions</p> <ol style="list-style-type: none"> Write variable expressions: one operation F5B Write variable expressions: two operations CX9 Write variable expressions: word problems 6LQ <p>Identify parts of an expression</p> <ol style="list-style-type: none"> Sort factors of numerical expressions TXX

5. Identify terms and coefficients 9KE
6. Sort factors of variable expressions QXS

Geometry

Standard	IXL skills
Find the area of trapezoids by composing rectangles and triangles	<ol style="list-style-type: none"> 1. Understanding area of a trapezoid 42R 2. Area of trapezoids PKW
Solve problems involving the volume of rectangular prisms	<ol style="list-style-type: none"> 1. Volume of cubes and rectangular prisms XHF 2. Volume of cubes and rectangular prisms with fractional side lengths BQK 3. Volume of cubes and rectangular prisms: word problems BBM
Find the surface area of three-dimensional figures	<ol style="list-style-type: none"> 1. Surface area of cubes and rectangular prisms RMG 2. Surface area of triangular prisms UGR 3. Surface area of pyramids 5XW

Statistics and Probability

Standard	IXL skills
Interpret the mean and median of data sets	<ol style="list-style-type: none"> 1. Calculate mean and median WSS
Explain how changes in data values affect center and spread	<ol style="list-style-type: none"> 1. Changes in mean, median, mode, and range 2G9
Create and interpret box plots	<ol style="list-style-type: none"> 1. Box plots E9F
Represent and analyze sets of data	<p>Represent sets of data</p> <ol style="list-style-type: none"> 1. Create line plots 5HD 2. Create histograms 7NG 3. Create stem-and-leaf plots 7VE <p>Interpret sets of data</p> <ol style="list-style-type: none"> 4. Interpret histograms CBF 5. Interpret stem-and-leaf plots 2E8 6. Interpret charts and graphs to find mean, median, mode, and range 2WK

7. Describe distributions in line plots RZL

Modeling

Standard	IXL skills
Use manipulatives to improve models	<ol style="list-style-type: none"> 1. Solve percent problems using grid models YX6 2. Solve percent problems using strip models MEA 3. Model and solve addition equations using algebra tiles 3U7

Justification and Explanation

Standard	IXL skills
Support claims with evidence and clear solution paths	<ol style="list-style-type: none"> 1. Which is the better coupon? WLZ 2. Write equivalent expressions using properties R8H
Thoroughly justify conclusions by explaining errors in reasoning and providing counterexamples	<ol style="list-style-type: none"> 1. Identify mistakes involving the order of operations V46

Integrating Essential Skills

Standard	IXL skills
Solve multi-step problems involving fractions with unlike denominators	<ol style="list-style-type: none"> 1. Multiply three or more fractions and whole numbers KJF 2. Multiply three or more mixed numbers, fractions, and/or whole numbers W5G
Explain how to classify polygons by sides and angles	<ol style="list-style-type: none"> 1. Classify triangles XM6 2. Classify quadrilaterals BCV
Write and evaluate complex numerical expressions	<p>Write expressions</p> <ol style="list-style-type: none"> 1. Write numerical expressions for word problems XB2 <p>Evaluate expressions</p> <ol style="list-style-type: none"> 2. Evaluate numerical expressions involving decimals YEE

3. Evaluate numerical expressions involving fractions WNE
