



IXL Skill Plan for the Florida Standards Assessments

7th grade



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Ratio and Proportional Relationships

Standard	IXL skills
<p>7.RP.1.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.</p>	<ol style="list-style-type: none"> 1. Calculate unit rates with fractions 57X 2. Unit prices N7G
<p>7.RP.1.2 Recognize and represent proportional relationships between quantities.</p>	<p>Ratios</p> <ol style="list-style-type: none"> 1. Identify equivalent ratios ZFM 2. Equivalent ratios: word problems DJ8 3. Do the ratios form a proportion? MJQ 4. Do the ratios form a proportion: word problems SHV <p>Proportional relationships</p> <ol style="list-style-type: none"> 5. Write equations for proportional relationships from tables 6GU 6. Identify proportional relationships by graphing AAN 7. Write equations for proportional relationships from graphs JKH 8. Identify proportional relationships from graphs and equations NB5 9. Identify proportional relationships from tables 6V7 10. Interpret graphs of proportional relationships RMH 11. Write and solve equations for proportional relationships VKK <p>Constant of proportionality</p> <ol style="list-style-type: none"> 12. Find the constant of proportionality from a table LKZ 13. Find the constant of proportionality from a graph ZUT <p>Percents</p> <ol style="list-style-type: none"> 14. Percents of numbers and money amounts 93K 15. Solve percent equations 67F

Word problems

16. Solve proportions: word problems WB7
17. Estimate population size using proportions 3C9
18. Percents of numbers: word problems EXE

7.RP.1.3 Use proportional relationships to solve multistep ratio and percent problems.

Unit prices

1. Unit prices with unit conversions KJ8
2. Unit prices: find the total price ENH

Percent of change

3. Percent of change BL7
4. Percent of change: word problems 54S
5. Percent of change: find the original amount word problems RCM

Percent problems

6. Solve percent equations: word problems JS6
7. Percent of a number: tax, discount, and more SPN
8. Find the percent: tax, discount, and more PBM
9. Multi-step problems with percents ZHX
10. Which is the better coupon? QT6
11. Sale prices: find the original price BDA

Simple interest

12. Simple interest E7Y
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Expressions and Equations

Standard	IXL skills
<p>7.EE.1.1 Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.</p>	<p>Operations</p> <ol style="list-style-type: none"> 1. Multiply using the distributive property NUY 2. Add and subtract linear expressions 6BT <p>Equivalent expressions</p> <ol style="list-style-type: none"> 3. Write equivalent expressions using properties 6XR 4. Identify equivalent linear expressions I DRB 5. Identify equivalent linear expressions II KAR <p>Factors of linear expressions</p> <ol style="list-style-type: none"> 6. Factors of linear expressions J9G
<p>7.EE.1.2 Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.</p>	<ol style="list-style-type: none"> 1. Identify equivalent linear expressions: word problems KWH
<p>7.EE.2.3 Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.</p>	<p>Order of operations</p> <ol style="list-style-type: none"> 1. Evaluate numerical expressions involving integers 7YN 2. Evaluate numerical expressions involving decimals FNM 3. Evaluate numerical expressions involving fractions XXQ 4. Evaluate numerical expressions involving exponents D7P <p>Evaluate variable expressions</p> <ol style="list-style-type: none"> 5. Evaluate linear expressions UG6 6. Evaluate multi-variable expressions T56 7. Evaluate nonlinear expressions ZHY <p>Real-life problems</p> <ol style="list-style-type: none"> 8. Maps with decimal distances WT7 9. Maps with fractional distances KXP 10. Multi-step word problems JVU

7.EE.2.4 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.

Solve equations

1. Model and solve equations using algebra tiles EGK
2. Solve two-step equations QEB
3. Solve equations involving like terms VSW
4. Solve equations: complete the solution 66R

One-step inequalities

5. Solve one-step inequalities QWH
6. Graph solutions to one-step inequalities TFK

Two-step inequalities

7. Solve two-step inequalities XGQ
8. Graph solutions to two-step inequalities 6TT

Word problems

9. Solve equations: word problems D2Y
10. Solve word problems involving two-variable equations YJT

Geometry

Standard	IXL skills
<p>7.G.1.1 Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.</p>	<p>Scale drawings</p> <ol style="list-style-type: none"> 1. Scale drawings: word problems 84H 2. Scale drawings: scale factor word problems KCM <p>Changes in scale</p> <ol style="list-style-type: none"> 3. Perimeter and area: changes in scale ZC6
<p>7.G.1.2 Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.</p>	<ol style="list-style-type: none"> 1. Triangle inequality 5RX 2. Graph triangles and quadrilaterals MEZ
<p>7.G.1.3 Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.</p>	<ol style="list-style-type: none"> 1. Cross sections of three-dimensional figures HFJ
<p>7.G.2.4 Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.</p>	<ol style="list-style-type: none"> 1. Parts of a circle 2VL 2. Area of circles YA8 3. Circumference of circles KS7 4. Circles: word problems P56
<p>7.G.2.5 Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.</p>	<ol style="list-style-type: none"> 1. Identify complementary, supplementary, vertical, and adjacent angles HKG 2. Find measures of complementary, supplementary, vertical, and adjacent angles CST
<p>7.G.2.6 Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.</p>	<p>Area</p> <ol style="list-style-type: none"> 1. Area of rectangles and parallelograms 62H 2. Area of triangles and trapezoids ENE 3. Area of compound figures with triangles MRG 4. Area between two shapes RKC

Volume

5. Volume of cubes and prisms URT

Surface area

6. Surface area of cubes and prisms RFP

Statistics and Probability

Standard	IXL skills
<p>7.SP.1.2 Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions.</p> <p><i>Also assesses:</i></p> <p>7.SP.1.1 Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.</p>	<ol style="list-style-type: none"> 1. Estimate population size using proportions 3C9 2. Identify representative, random, and biased samples 5V3
<p>7.SP.2.4 Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations.</p> <p><i>Also assesses:</i></p> <p>7.SP.2.3 Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability.</p>	<ol style="list-style-type: none"> 1. Calculate mean, median, mode, and range U2A 2. Interpret charts and graphs to find mean, median, mode, and range CYK 3. Mean, median, mode, and range: find the missing number ZWS 4. Changes in mean, median, mode, and range 9UP
<p>7.SP.3.5 Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around $\frac{1}{2}$ indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.</p>	<ol style="list-style-type: none"> 1. Probability of simple events ZZB

7.SP.3.6 Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability.

7.SP.3.7 Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.

Also assesses:

7.SP.3.8 Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.

1. Make predictions using theoretical probability 9UW

Simple and opposite events

1. Probability of simple events ZZB
2. Probability of simple events and opposite events F88

Experimental probability

3. Experimental probability 9AA

Compound events

4. Compound events: find the number of outcomes HZR
5. Compound events: find the number of sums SCV
6. Probability of compound events YPQ

Independent and dependent events

7. Identify independent and dependent events 9M6
8. Probability of independent and dependent events NED

Counting principle

9. Find the number of outcomes: word problems EKX

The Number System

Standard

7.NS.1.1 Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.

7.NS.1.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational

IXL skills

Opposite integers

1. Absolute value and opposite integers NSB
2. Quantities that combine to zero: word problems 7SP

Integer addition and subtraction rules

3. Integer addition rules ERH
4. Integer subtraction rules QZA
5. Integer addition and subtraction rules 6EV
6. Apply addition and subtraction rules Y8T

Modeling integer addition and subtraction

7. Add integers using counters FTM
8. Subtract integers using counters BGL
9. Add and subtract integers using counters B8X

Integer addition and subtraction

10. Add integers QFU
11. Subtract integers HEU
12. Add and subtract integers FNS

Positive rational numbers

13. Add and subtract decimals BP2
14. Add and subtract fractions NGL
15. Add and subtract mixed numbers 9BE

Rational numbers

16. Add and subtract positive and negative decimals WCZ
17. Add and subtract positive and negative fractions SD2
18. Add and subtract rational numbers GKU

Integer multiplication and division rules

1. Integer multiplication rules K7U
2. Integer division rules T9Q

numbers.

3. Integer multiplication and division rules 5R8
4. Apply multiplication and division rules V5V
5. Equal quotients of integers 2QY

Integer multiplication and division

6. Multiply integers DQT
7. Divide integers CTV
8. Multiply and divide integers R8D

Positive decimals

9. Multiply decimals TCU
10. Divide decimals 6HB

Positive fractions

11. Multiply fractions and whole numbers ZNQ
12. Multiply fractions PDK
13. Multiply mixed numbers JNY
14. Divide fractions X7A
15. Divide mixed numbers UPF

Rational numbers

16. Multiply and divide positive and negative decimals K7V
17. Multiply and divide positive and negative fractions 2B5
18. Multiply and divide rational numbers BXW

Identifying rational numbers

19. Classify numbers WVQ
20. Convert fractions or mixed numbers to decimals M2D

7.NS.1.3 Solve real-world and mathematical problems involving the four operations with rational numbers.

Addition and subtraction

1. Complete addition and subtraction equations with integers P6A
2. Add and subtract integers: word problems 2DD
3. Add and subtract decimals: word problems RKZ
4. Add and subtract fractions: word problems ENL
5. Add and subtract mixed numbers: word problems 6YT

Multiplication and division

6. Complete multiplication and division equations with integers K94
7. Multiply decimals and whole numbers: word problems VZN
8. Divide decimals by whole numbers: word problems TUU
9. Multiply fractions and mixed numbers: word problems 5NJ
10. Divide fractions and mixed numbers: word problems 5VR

Mixed operations

11. Add, subtract, multiply, and divide integers B8A
 12. Add, subtract, multiply, and divide decimals: word problems TGN
 13. Add, subtract, multiply, and divide fractions and mixed numbers: word problems KR7
 14. Add, subtract, multiply, and divide money amounts: word problems HGN
 15. Price lists CVW
 16. Estimate to solve word problems MQ6
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