

# Math Assessed Indicators

## 7th Grade

1.1.A1	generates and/or solves real-world problems using : a. ▲ equivalent representations of rational numbers and simple algebraic expressions
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### Resources

(See Appendix for sample problems from KSDE Learning Station)

<http://www.primaryresources.co.uk/maths/mathsD1.htm> Check out the “Word Problems from the Fair”, “Multi Step problems (Clare Clarke)”, and 6 Word Problems (WWtbaM) (Jan Watson) (This is a Who wants to be a Millionaire). Money sign looks different from American dollar sign. May like other worksheets.

<http://www.kutasoftware.com/free.html> Go to Word Problems > Systems of Equation Word Problems and others

<http://www.shodor.org/interactivate/activities/AlgebraFour/>

1.4.K2	performs and explains these computational procedures (2.4.K1a): a. ▲ N adds and subtracts decimals from ten millions place through hundred thousandths place; b. ▲ N multiplies and divides a four-digit number by a two-digit number using numbers from thousands place through thousandths place; c. ▲ N multiplies and divides using numbers from thousands place through thousandths place by 10; 100; 1,000; .1; .01; .001; or single-digit multiples of each, e.g., $54.2 \div .002$ or $54.3 \times 300$ ; d. ▲ N adds, subtracts, multiplies, and divides fractions and expresses answers in simplest form;
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### Resources

<http://www.ixl.com/math/grade-7>

Go to above site and go to Operations with Decimals

<http://www.ixl.com/math/grade-7/add-and-subtract-fractions>

<http://www.ixl.com/math/grade-7/multiply-fractions>

<http://www.ixl.com/math/grade-7/divide-fractions>

1.4.K5	▲ finds percentages of rational numbers (2.4.K1a,c) (\$),
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### Resources

<http://www.mathworksheets4kids.com/percent.html>

For above worksheet go to: Methods of Finding Percent > Decimal Methods

[http://www.mathplayground.com/percent\\_shopping.html](http://www.mathplayground.com/percent_shopping.html)

[http://www.learnalberta.ca/content/mejhm/index.html?l=0&ID1=AB.MATH.JR.NU MB&ID2=AB.MATH.JR.NUMB.PERC&lesson=html/video\\_interactives/percentages/percentagesSmall.html](http://www.learnalberta.ca/content/mejhm/index.html?l=0&ID1=AB.MATH.JR.NU MB&ID2=AB.MATH.JR.NUMB.PERC&lesson=html/video_interactives/percentages/percentagesSmall.html)

<http://www.ixl.com/math/grade-6/percentages-of-numbers-and-money-amounts>

<http://www.ixl.com/math/grade-6/percentages-of-numbers-word-problems>

2.1.K1	identifies, states, and continues a pattern presented in various formats including numeric (list or table), algebraic (symbolic notation), visual (picture, table, or graph), verbal (oral description), kinesthetic (action), and written using these attributes: a. ▲ counting numbers including perfect squares, cubes, and factors and multiples (number theory) b. ▲ positive rational numbers including arithmetic and geometric sequences (arithmetic: sequence of numbers in which the difference of two consecutive numbers is the same, geometric: a sequence of numbers in which each succeeding term is obtained by multiplying the preceding term by the same number) (2.4.K1a)
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Resources

<http://www.teachervision.fen.com/problem-solving/teaching-methods/48900.html>

<http://www.funbrain.com/cracker/index.html>

<http://www.ixl.com/math/grade-7/number-sequences-mixed-review>

<http://www.mathsisfun.com/numberpatterns.html>

<http://www.mathslice.com/actionctl.php?actionid=516>

<http://www.dadsworksheets.com/v1/Worksheets/Number%20Patterns.html>

2.1.K4	▲ ■ states the rule to find the nth term of a pattern with one operational change (addition or subtraction) between consecutive terms (2.4.K1a),
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Resources

<http://www.ixl.com/math/grade-6/write-linear-functions>

<http://www.ixl.com/math/grade-7/write-a-rule-for-a-function-table>

[http://www.math-magic.com/sequences/nth\\_term.htm](http://www.math-magic.com/sequences/nth_term.htm)

[http://www.bbc.co.uk/schools/ks3bitesize/maths/algebra/linear\\_sequences/revise3.shtml](http://www.bbc.co.uk/schools/ks3bitesize/maths/algebra/linear_sequences/revise3.shtml)

<http://studymaths.co.uk/keytopics/nthterm.html>

<http://www.s-cool.co.uk/gcse/maths/sequences/revise-it/the-nth-term>

<http://www.yourteacher.com/algebra1/findingthenthterm.php>

2.2.A1	▲ represents real-world problems using variables and symbols to write linear expressions, one- or two-step equations (2.4.A1e) (\$),
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Resources

<http://www.quia.com/jg/319817.html>

<http://www.ixl.com/math/grade-6/write-variable-expressions-to-represent-word-problems>

<http://www.kutasoftware.com/free.html> Go to Word Problems > Systems of Equation Word Problems and others

<http://www.shodor.org/interactivate/activities/AlgebraFour/>

2.2.K7	▲ knows the mathematical relationship between ratios, proportions, and percents and how to solve for a missing term in a proportion with positive rational number solutions and monomials (2.4.K1a,c) (\$),
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Resources

<http://www.kutasoftware.com/freeige.html> Look for Similarity>Solving

Proportions

<http://www.ixl.com/math/grade-6/proportions>

<http://www.kutasoftware.com/FreeWorksheets/GeoWorksheets/7-Solving%20Proportions.pdf>

2.2.K8	▲ evaluates simple algebraic expressions using positive rational numbers (2.4.K1c) (\$),
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Resources

<http://www.bbc.co.uk/education/mathsfile/shockwave/games/postie.html>

<http://www.ixl.com/math/grade-6/solve-word-problems-involving-two-variable-equations>

<http://www.ixl.com/math/standards/kansas/grade-7> Look at sample problems under indicator 2.2.K8

3.1.K3	▲ identifies angle and side properties of triangles and quadrilaterals (2.4.K1h): a. sum of the interior angles of any triangle is $180^\circ$ ; b. sum of the interior angles of any quadrilateral is $360^\circ$ c. parallelograms have opposite sides that are parallel and congruent; d. rectangles have angles of $90^\circ$ , opposite sides are congruent; e. rhombi have all sides the same length, opposite angles are congruent; f. squares have angles of $90^\circ$ , all sides congruent; g. trapezoids have one pair of opposite sides parallel and the other pair of opposite sides are not parallel.
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Resources

<http://www.oswego.org/ocsd-web/games/bananahunt/bhunt.html>

<http://www.mathsisfun.com/geometry/interior-angles-polygons.html>

[http://www.mathsisfun.com/right\\_angle\\_triangle.html](http://www.mathsisfun.com/right_angle_triangle.html)

<http://www.mathsisfun.com/geometry/quadrilaterals-interactive.html>

<http://www.mathsisfun.com/quadrilaterals.html>

Geoboards

Online Geoboard--

[http://nlvm.usu.edu/en/nav/frames\\_asid\\_303\\_g\\_4\\_t\\_3.html?open=activities&from=grade\\_g\\_4.html](http://nlvm.usu.edu/en/nav/frames_asid_303_g_4_t_3.html?open=activities&from=grade_g_4.html) or

[http://nlvm.usu.edu/en/nav/frames\\_asid\\_279\\_g\\_4\\_t\\_3.html?open=activities&from=grade\\_g\\_4.html](http://nlvm.usu.edu/en/nav/frames_asid_279_g_4_t_3.html?open=activities&from=grade_g_4.html)

<http://www.bbc.co.uk/schools/gcsebitesize/maths/shapes/polygonsrev1.shtml>

<http://www.quia.com/rr/742769.html>

<http://www.mathsisfun.com/geometry/quadrilaterals-interactive.html>

[http://www.learnalberta.ca/content/mejhm/index.html?l=0&ID1=AB.MATH.JR.SHAP&ID2=AB.MATH.JR.SHAP&lesson=html/object\\_interactives/shape\\_classification/explore\\_it.html](http://www.learnalberta.ca/content/mejhm/index.html?l=0&ID1=AB.MATH.JR.SHAP&ID2=AB.MATH.JR.SHAP&lesson=html/object_interactives/shape_classification/explore_it.html)

[http://www.learnalberta.ca/content/mejhm/index.html?l=0&ID1=AB.MATH.JR.SHAP&ID2=AB.MATH.JR.SHAP&lesson=html/video\\_interactives/classifications/classificationsInteractive.html](http://www.learnalberta.ca/content/mejhm/index.html?l=0&ID1=AB.MATH.JR.SHAP&ID2=AB.MATH.JR.SHAP&lesson=html/video_interactives/classifications/classificationsInteractive.html)

3.2.A1	solves real-world problems by (\$) : c. ▲ ■ finding perimeter and area of two-dimensional composite figures of squares, rectangles, and triangles (2.4.A1h),
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Resources

<http://www.ixl.com/math/standards/kansas/grade-7> Check out the indicator

3.2.A1

<http://www.shodor.org/interactivate/activities/ShapeExplorer/>

<http://www.learnalberta.ca/content/mesg/html/math6web/index.html?page=lessons>

<http://www.ixl.com/math/grade-5/area-of-compound-figures>

<http://www.schooltube.com/video/15413b72df9f47178060/Area-of-Composite-Figures>

[http://www.mathscore.com/math/free/lessons/California/4th\\_grade/Perimeter\\_and\\_Area\\_of\\_Composite\\_Figures\\_sample\\_problems.html](http://www.mathscore.com/math/free/lessons/California/4th_grade/Perimeter_and_Area_of_Composite_Figures_sample_problems.html)

<http://www.suffolkmaths.co.uk/pages/Lesson%20Resources/Shape/20%20Mensuration/Questions%20-%20Composite%20Shapes%2056.pdf>

Good Geometry unit that includes several indicators for 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> (Worksheets)--

[http://www.enslow.com/product\\_images/worksheets/FiguringOutGeometry.pdf](http://www.enslow.com/product_images/worksheets/FiguringOutGeometry.pdf)

[http://www.cimt.plymouth.ac.uk/projects/mepres/book7/bk7i9/bk7\\_9i4.htm](http://www.cimt.plymouth.ac.uk/projects/mepres/book7/bk7i9/bk7_9i4.htm)

3.2.K4	▲ knows and uses perimeter and area formulas for circles, squares, rectangles, triangles, and parallelograms (2.4.K1h).
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Resources

<http://www.mathsisfun.com/activity/garden-area.html>

<http://www.mathgoodies.com/lessons/vol1/perimeter.html>

[http://www.bgfl.org/bgfl/custom/resources\\_fpf/client\\_fpf/ks2/maths/perimeter\\_and\\_area/index.html](http://www.bgfl.org/bgfl/custom/resources_fpf/client_fpf/ks2/maths/perimeter_and_area/index.html)

<http://www.ixl.com/math/standards/kansas/grade-7> Check out each area listed under indicator 3.2.K4

<http://www.quia.com/rr/750935.html>

<http://www.ixl.com/math/grade-6/circles-calculate-area-circumference-radius-and-diameter>

<http://www.ixl.com/math/grade-6/circles-calculate-area-circumference-radius-and-diameter>

Circles worksheet--

<http://www.kutasoftware.com/FreeWorksheets/GeoWorksheets/11-Circumference%20and%20Area%20of%20Circles.pdf>

3.2.K6	▲ uses given measurement formulas to find (2.4.K1h): a. surface area of cubes, b. volume of rectangular prisms.
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Resources

<http://www.ixl.com/math/grade-7> Look under geometry p.25 - p. 30 for review and background knowledge.

<http://www.mathplayground.com/mathvideos.html> Go to geometry and then to surface area of cubes and volume of rectangular prisms.

<http://www.learner.org/interactives/geometry/index.html>

[http://www.scholarnet.co.nz/member/courses/smol/data/site/flash\\_apps/Measurement.php](http://www.scholarnet.co.nz/member/courses/smol/data/site/flash_apps/Measurement.php)

<http://www.asset.asu.edu/new/mathactive/lessons/263/look.swf>

<http://www.asset.asu.edu/new/mathactive/lessons/263/look.swf>

3.3.A3	▲ ■ determines the actual dimensions and/or measurements of a two-dimensional figure represented in a scale drawing (2.4.A1i).
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Resources

Solving these problems by setting up a proportion problem.

<http://www.kutasoftware.com/freeige.html> Look for Similarity>Solving Proportions.

(Scaled drawing lessons) [www.clarkson.edu/.../Lesson8%20-%20%20Drawing%20to%20Scale.pdf](http://www.clarkson.edu/.../Lesson8%20-%20%20Drawing%20to%20Scale.pdf)

<http://www.ixl.com/math/grade-6/scale-drawings>

<http://www.ixl.com/math/grade-6/find-side-lengths-of-similar-figures>

<http://www.glencoe.com/sec/math/studytools/cgi-bin/msgQuiz.php4?isbn=0-02-833050-1&chapter=8&lesson=3>

4.2.K1	▲ organizes, displays, and reads quantitative (numerical) and qualitative (non-numerical) data in a clear, organized, and accurate manner including a title, labels, categories, and rational number intervals using these data displays (2.4.K1j) (\$): a. frequency tables; b. bar, line, and circle graphs; c. Venn diagrams or other pictorial displays; d. charts and tables; e. stem and leaf plots (single); f. scatter plots; g. box and whiskers plots
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Resources

<http://ellerbruch.nmu.edu/cs255/jnord/boxplot.html> Box and Whiskers Plot

<http://www.purplemath.com/modules/venndiag2.htm> Venn Diagram

[www.Internet4classrooms.com/skills\\_7th\\_math.htm](http://www.Internet4classrooms.com/skills_7th_math.htm) Go to:

Data Analysis & Probability

Fun and Sun Rent-A-Car

Spy Guys Interactive

Box and Whisker Plot

Long Distance Airplanes

Stem-and-Leaf Plots – Their Construction and Use

Frequency Tables-

<http://www.bbc.co.uk/education/mathsfile/shockwave/games/datapick.html>

Scatter Plots-

<http://www.bbc.co.uk/schools/gcsebitesize/maths/data/scatterdiagramsact.shtml>

Line Graph--

<http://www.bbc.co.uk/schools/gcsebitesize/maths/data/representingdata2act.shtml>

Circle Graph--

<http://www.bbc.co.uk/schools/gcsebitesize/maths/data/representingdata1act.shtml>

<http://www.ixl.com/math/grade-6/circle-graphs-with-fractions>

Stem and Leaf-- <http://www.ixl.com/math/grade-6/stem-and-leaf-plots>

<http://www.shodor.org/interactivate/activities/StemAndLeafPlotter/>

Venn Diagram-- <http://www.ixl.com/math/grade-5/use-venn-diagrams-to-solve-problems>

4.2.A3	▲ recognizes and explains (2.4.A1k): a. ■ misleading representations of data;b. the effects of scale or interval changes on graphs of data sets.
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Resources

[http://go.hrw.com/resources/go\\_mt/hm3/so/c3ch9bso.pdf](http://go.hrw.com/resources/go_mt/hm3/so/c3ch9bso.pdf)

<http://www.asset.asu.edu/new/mathactive/lessons/8/interface.swf>

[http://www.glencoe.com/sec/math/prealg/prealg03/extra\\_examples/chapter12/lesson12\\_5.pdf](http://www.glencoe.com/sec/math/prealg/prealg03/extra_examples/chapter12/lesson12_5.pdf)

Scientific Notation

<http://janus.astro.umd.edu/cgi-bin/astro/scinote.pl>

[http://www.aaamath.com/g71g\\_sx1.htm](http://www.aaamath.com/g71g_sx1.htm)

<http://www.kutasoftware.com/FreeWorksheets/Alg1Worksheets/Writing%20Scientific%20Notation.pdf>

### **Additional Resources:**

50 page worksheet packet that contains worksheets on several different indicators--  
<http://www.dpcdsb.org/NR/rdonlyres/B2C31F51-1F9D-478A-B8E2->

Formative Tests by indicator or random sort can be created via KSDE Learning Station or school psychologists. The formative tests align directly with each indicator. The tests are also helpful as assignment content.

Math on Call and Algebra to Go books are both inexpensive wonderful resources for teachers, students, paras, and parents.

Math on Call Book

[http://www.amazon.com/s/ref=nb\\_sb\\_noss?url=search-alias%3Dstripbooks&field-keywords=math+on+call&x=0&y=0](http://www.amazon.com/s/ref=nb_sb_noss?url=search-alias%3Dstripbooks&field-keywords=math+on+call&x=0&y=0)

Algebra to Go Book

[http://www.amazon.com/s/ref=nb\\_sb\\_noss?url=search-alias%3Dstripbooks&field-keywords=algebra+to+go&x=0&y=0](http://www.amazon.com/s/ref=nb_sb_noss?url=search-alias%3Dstripbooks&field-keywords=algebra+to+go&x=0&y=0)

Hands-On Equations <http://www.borenson.com/>

Middle School Math Dictionary

<http://intermath.coe.uga.edu/dictionary/results.asp?letter=A>

Multimedia Math Glossary

<http://www.harcourtschool.com/glossary/math2/index6.html>

936134309271/27723/MFM1P1skillsreview.pdf