GREATER ESSEX COUNTY District School Board

GECDSB MATH KIT

TEACHER'S RESOURCE GUIDE

JUNIOR J

Why Use Manipulatives?

- ☑ *Make students' thinking visible, so that everyone can see it, talk about it and learn from it;*
- ☑ *Provide a context for developing mathematical concepts;*
- ☑ *Help students explore, think about, and talk about mathematics;*
- ☑ *Help students construct meaning and see patterns and relationships;*
- ☑ *Allow students to more easily test, revise, and confirm their reasoning;*
- ☑ *Help students make connections between concepts and symbols;*
- ☑ *Help students talk about the math, with the result that teachers have a basis for assessing students' understanding and can make programming decisions based on their observations.*

A Guide to Effective Instruction in Mathematics, K – 6, volume 3

Manipulatives are necessary tools for supporting the effective learning of mathematics by all students. These concrete learning tools invite students to explore and represent abstract mathematical ideas in varied, concrete, tactile, and visually rich ways.

Moreover, using a variety of manipulatives helps deepen and extend students' understanding of mathematical concepts. The Ontario Curriculum, grades 1-8, Mathematics, 2005

GECDSB believes in the value of using math manipulatives as part of an effective math program and so math kits have been purchased to support student learning. This resource guide provides details of items within the kits.

Math Kit Supplements

are available to order through Medianet.
Details about these materials, quantities, time, etc. can be found at
www.mediacentre.ca:
kit #41000.

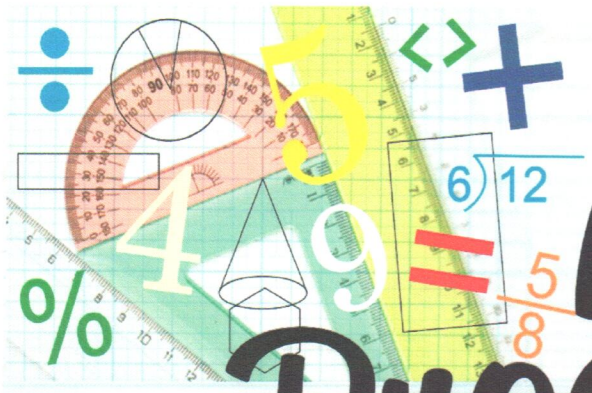
This will allow any teacher to order supplementary materials for a specific content exploration or unit for a time period through the year.

Once a classroom teacher has established a Medianet account, they can request a math kit appropriate for their division. Kits must be returned to the resource center every June for refurbishment. We are reasonable and understanding about some materials going missing when kits are in use. If more than an acceptable amount is missing, the school will be charged for the materials and credit applied when returned.

Questions to extend student learning while using manipulatives include:

"So you used one strategy here, is there another strategy you could use to represent how you could work on this problem?"	**seeking an alternative method**
"What do you think we should do next?"	**posing new challenges**
"Ok, do you want to explain to your partner what you are doing?"	**promoting group interaction**
"Why does this make sense to you?"	**encouraging sense-making**

Source: http://learnteachlead.ca/projects/works-making-space-students-think-mathematically-pdf/



Looking for Math Programs?

MEDIANET has over

4500 digital and DVD titles related to **Math!**

Check out CBC's **Monster Math Squad**

Monster Math Squad

...and the many lessons from the **Kahn Academy!**

Make and protect your own math resources!

Make 'N Take Centre

Essex Civic Centre - Basement

24" to 48"
Heavy Duty Lamination

Hundreds of Die-Cuts
Including numbers, geometric shapes, 3-D shapes

24x28" Posters & Enlarging
In-house posters available or send us your PDF to enlarge

Various Paper
(Magnetic, Foam and Felt)

For more information, visit
mediacentre.ca

- ✓ Math Kit Supplements are also available to order through Medianet.
- ✓ Search items available using 41000 as your key word in the search box.
- ✓ Any teacher may order materials for a specific content exploration or unit.

If you would like a Medianet account, please email Dwayne.Teskey@publicboard.ca

THE EDUCATIONAL MEDIA CENTRE

MON	TUES	WED	THUR	FRI
8:30 to 5:00	8:30 to 5:00	8:30 to 8:00	8:30 to 5:00	8:30 to 4:00

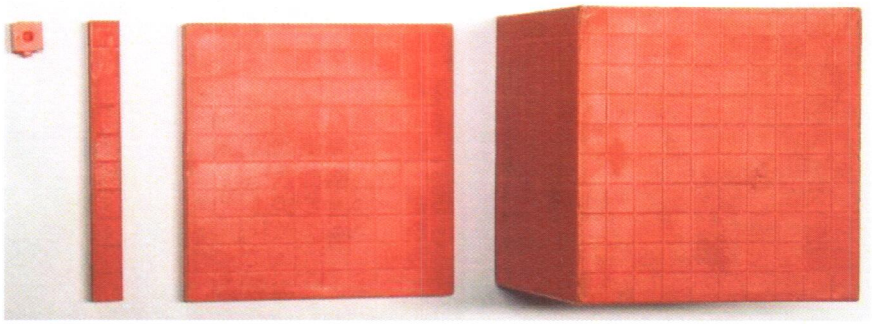
Junior Math Kit Teacher's Resource Guide
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#103 Base Ten Blocks set

**all attempts are made for parts to be same colour

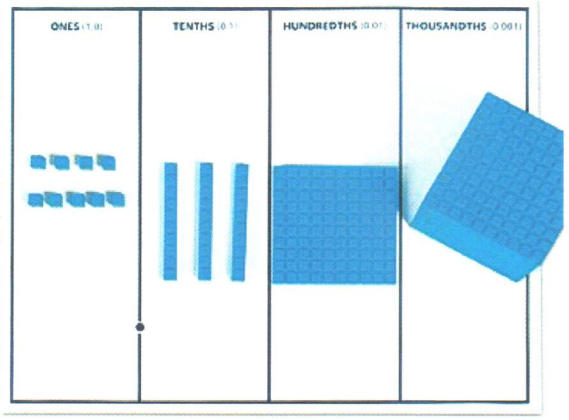
X200 (units)



X50 (rods) X30 (flats) X2 (cubes)

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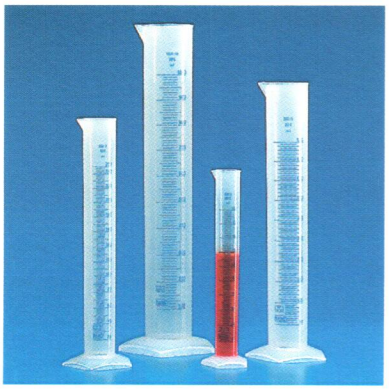
104 Base Ten Mats ** may be 2 sided

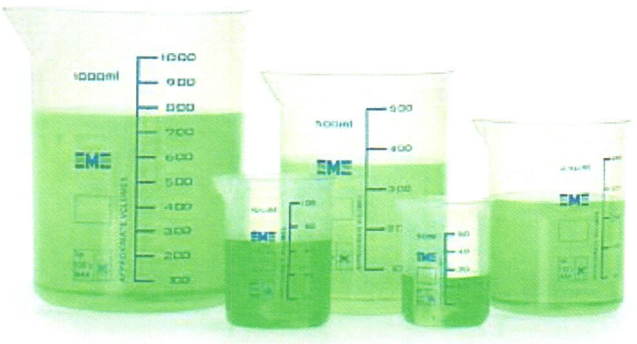


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106 Beakers – graduated cylinders (set/4)

**KEPT IN CLASSROOM, sent only if requested

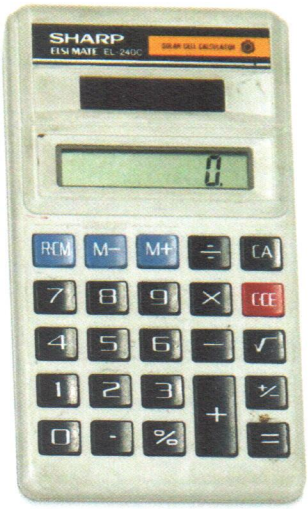




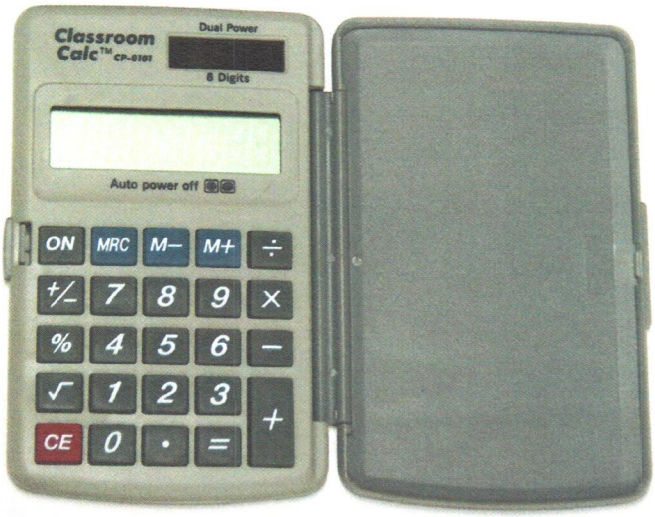
109 Calculators

**not all models/brands are acceptable, only those below.



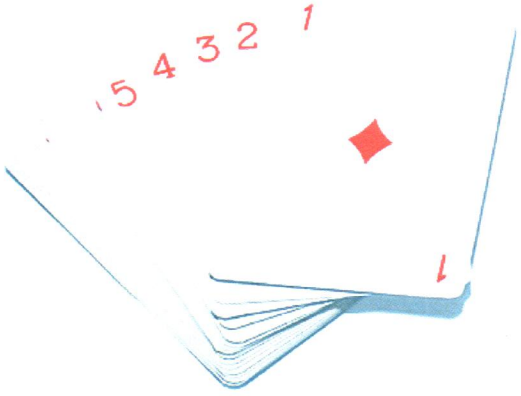




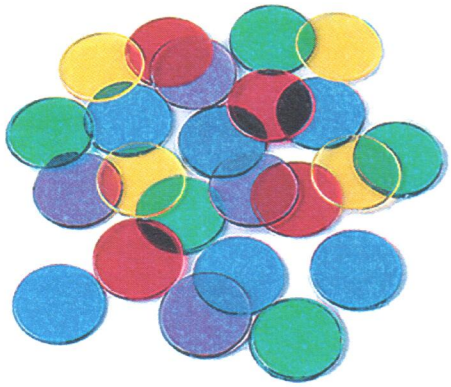


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111 Cards – playing, decks of



113 Counters (overhead, multi-coloured, circle)



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120 – Dice (probability, multi-coloured)



---

121 – Dice (regular)

**any colour
**dots type only



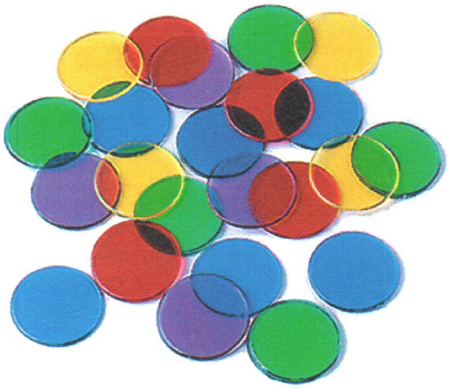
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123 – Elastics (coloured)

**various colours



113 Counters (overhead, multi-coloured, circle)



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120 – Dice (probability, multi-coloured)



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121 – Dice (regular)

**any colour

**dots type only



---

123 – Elastics (coloured)

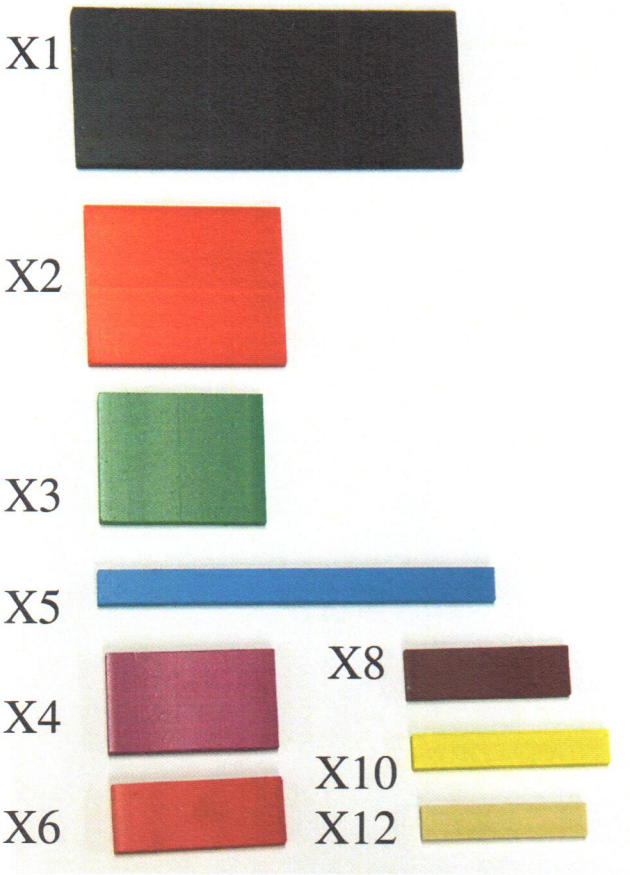
**various colours

**small baggie of



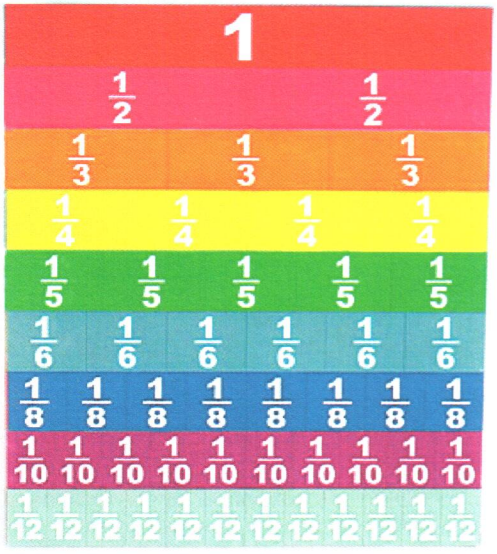
124 – Fraction Factory (set/51)

**overhead or opaque plastic pieces, but all sets should be the same type in one kit

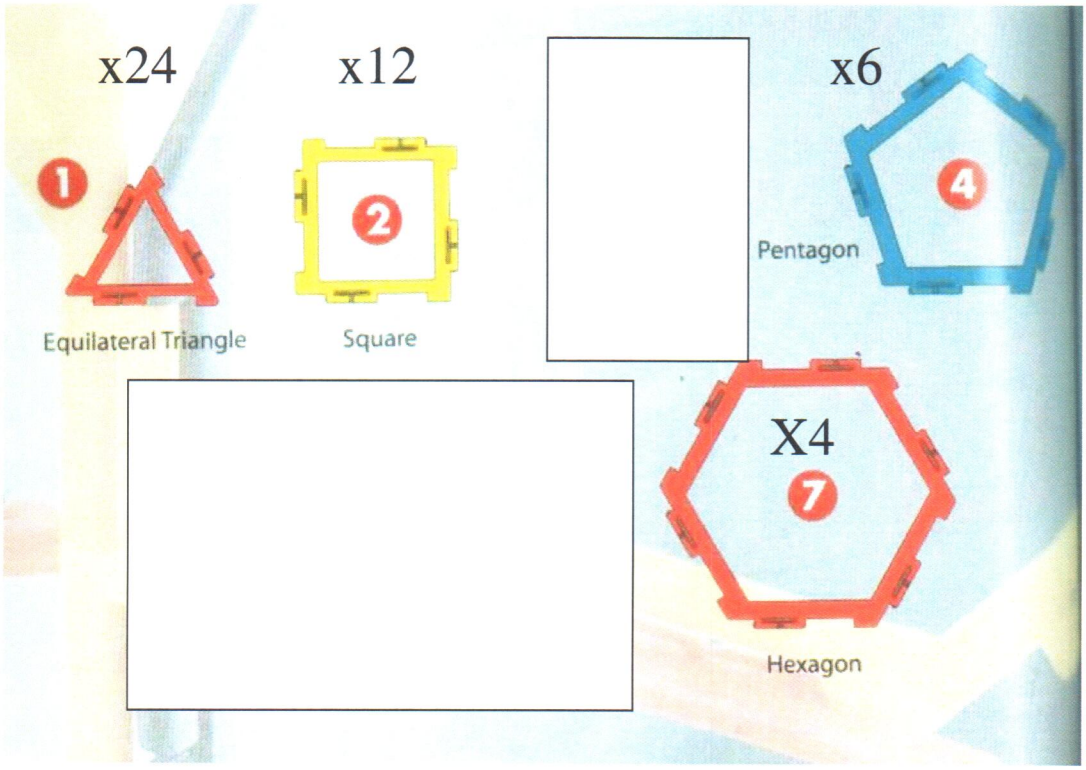


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125 – Fraction Strips (set/51)

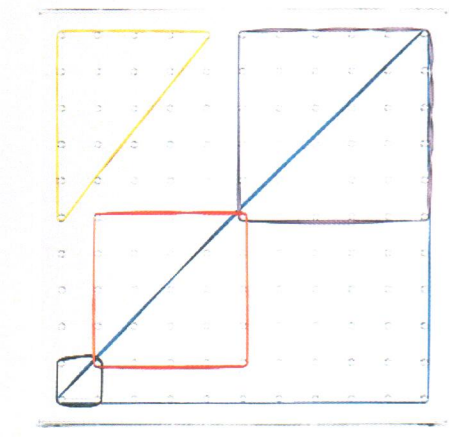


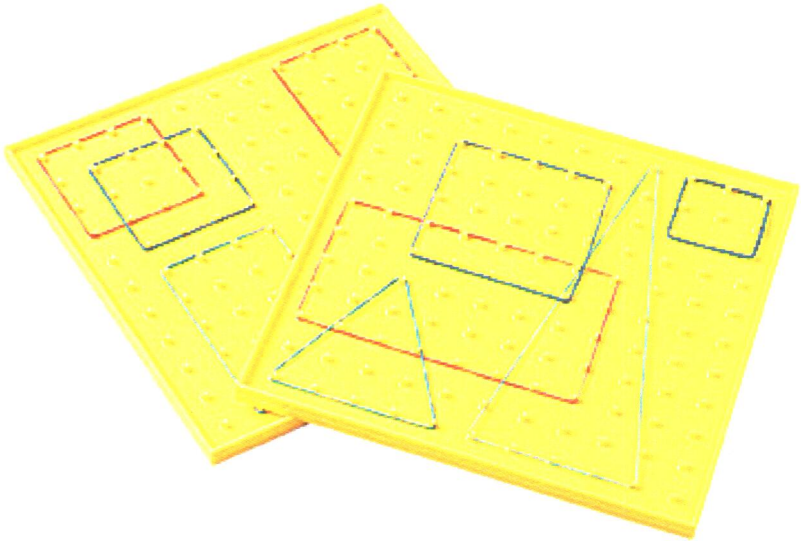
#155 – Frameworks set – SMALL (set/46)



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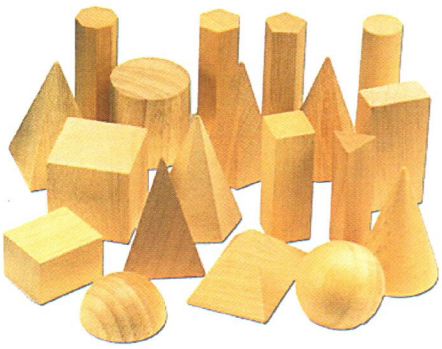
130 Overhead Geoboards – 11x11 pin
195 Geoboards – 11x11 pin – OPAQUE
**combination of overhead and opaque 11pin

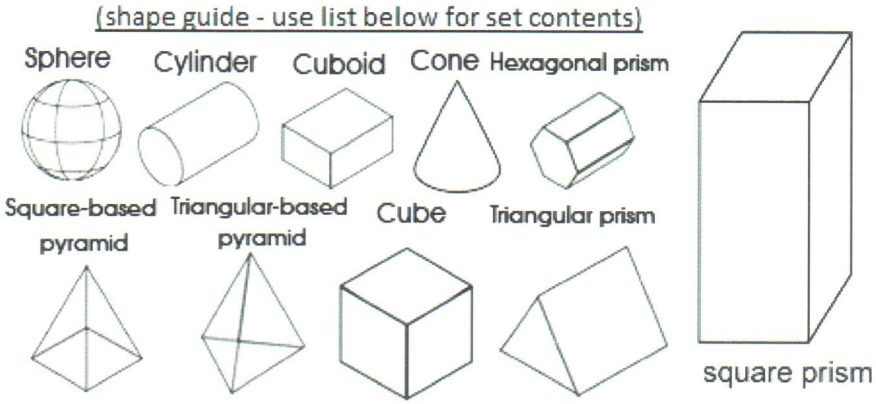




133 Geometric Solids – Wooden (set/15)

**each set may have a few extra shapes NOT on list below, (some factory sets contain 4 bonus shapes)
shapes should be similar size (fitting in palm) and not painted or decorated





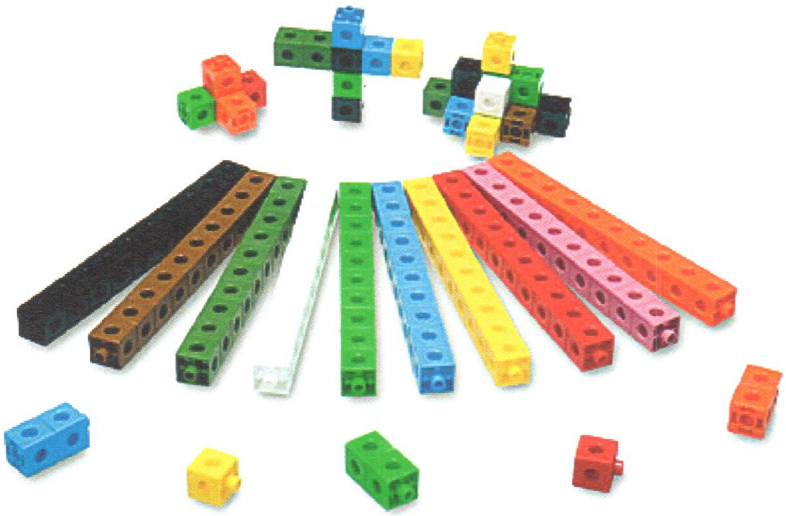
CORE set contains 1 of each:

Cone
Cuboid – long
Cylinder – fat/short
Hexagonal (6 sided face) Prism
Pentagonal (5 sided face) Prism
Square (4 sided face) Prism
½ Sphere
Triangular-based Pyramid
Cube
Cuboid - short
Cylinder – skinny/long
Octagonal (8 sided face) Prism
Square Based Pyramid
Sphere
Triangular (3 sided face) Prism

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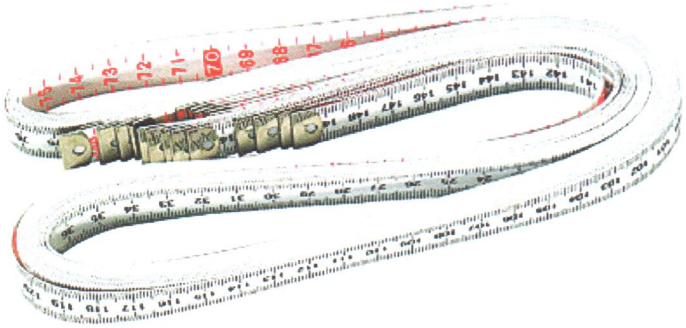
116 – Hex-a-link Connecting Cubes

**variety of colours
**must be multi-directional connecting



139 – Measuring Tapes

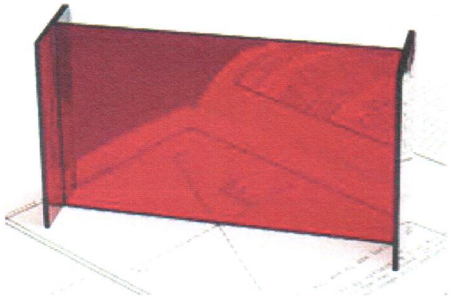
**should be 150 cm long

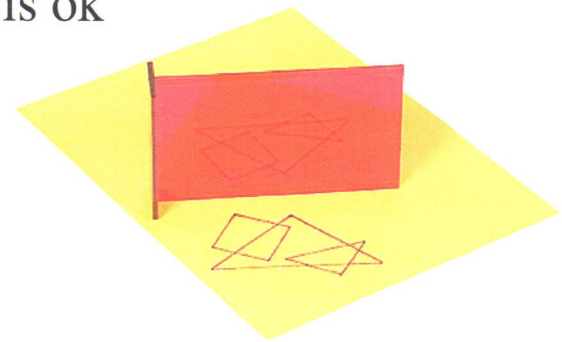


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140 - Miras

**single or double "T" end is ok





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142 – Money Set (bills/plastic coins/money tray)

**Canadian currency

**tray can be black/yellow/white (no lid)





x25 x25 x20 x20 x15 x15

x5 

x5 

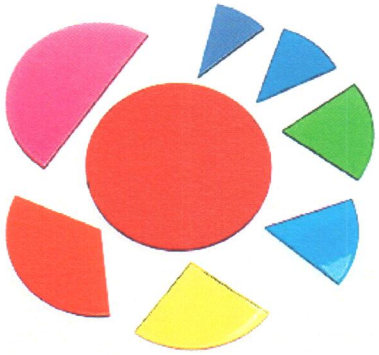
x10 

x10 

x10 

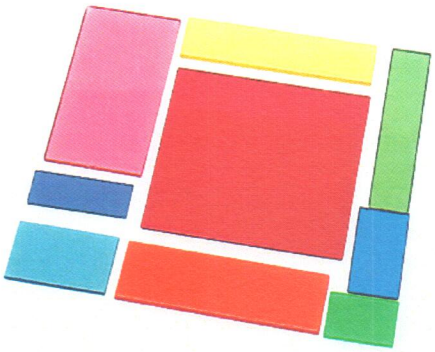
#147 – Overhead Fraction Circle

Set: 6 or 9 layers



#148 – Overhead Fraction Square

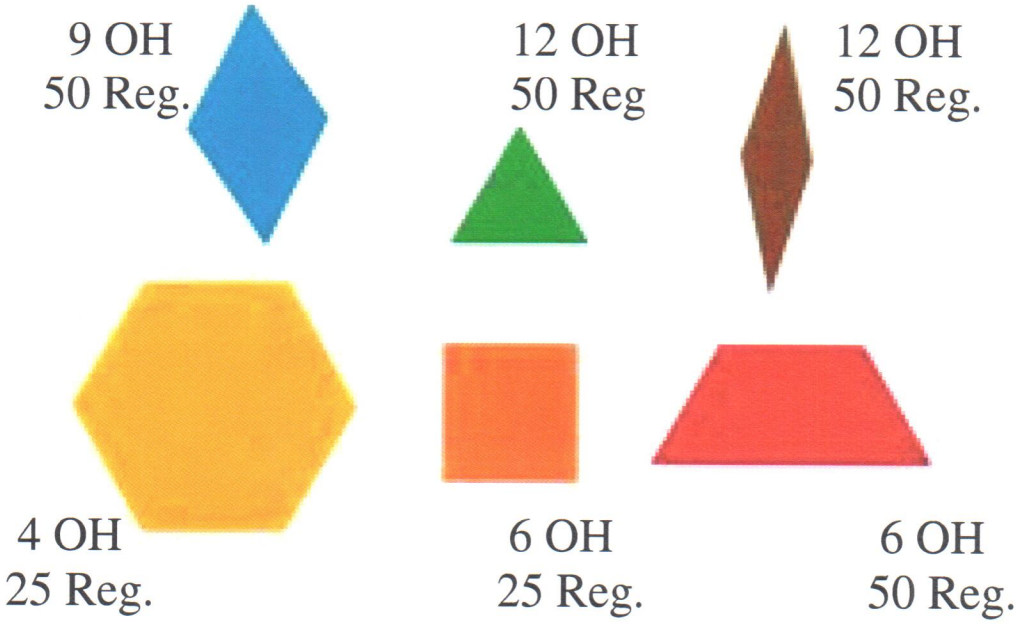
Set: 6 or 9 layers



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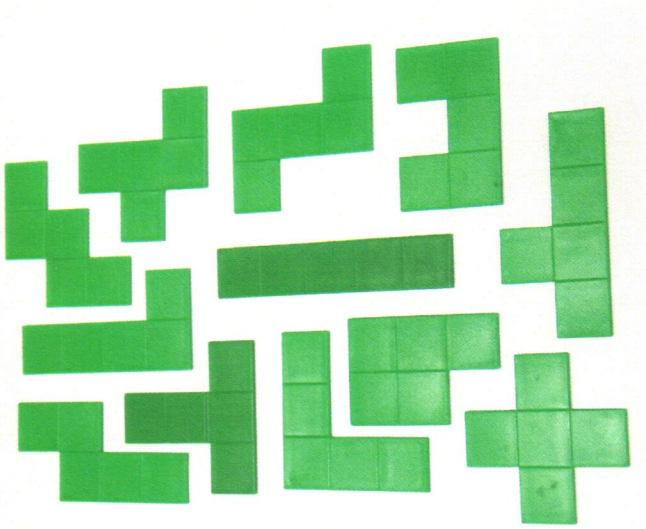
152 – Pattern Blocks (set/250)

**can be plastic or wood



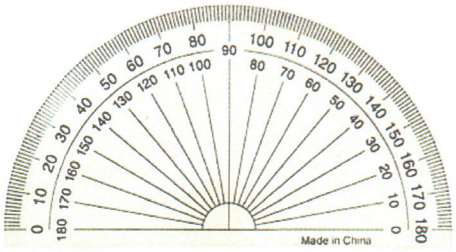
#153 – Pentominoes – Scored or Non-Scored (sets/12)

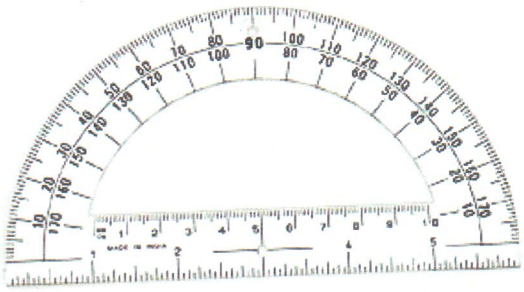
**one colour per set
Set is one of each:



#154 – Protractors

Either model is acceptable.





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194 – Scale – Kitchen style

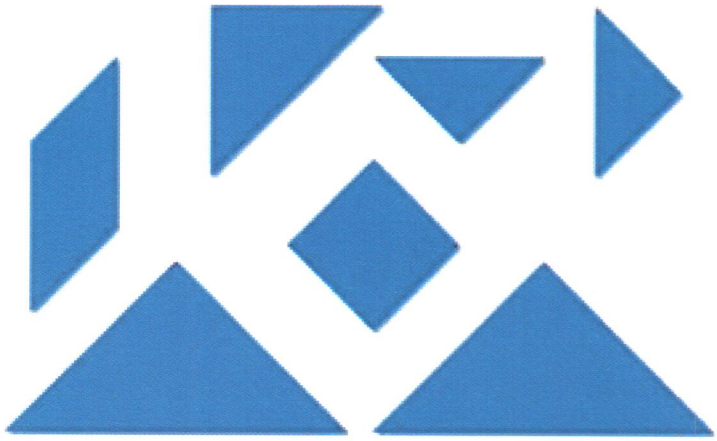
**any similar model (including tray)
**KEPT IN CLASSROOM,
sent only if requested



151/163 – Tangrams (combination of OVERHEAD/OPAQUE) (set/7)

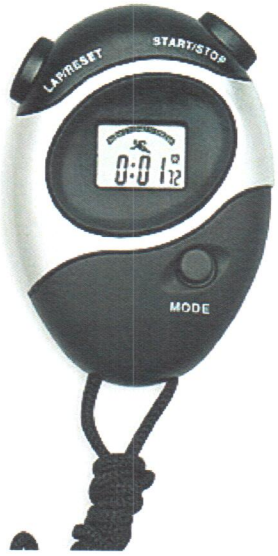
**one colour per set

**Set contains:



#203 – Timers

(electronic stop watches)



Math Kit Supplements

Below is a list of Math Kit Supplements available to order through Medianet kit #41000.

www.mediacentre.ca

Any teacher may order materials for a specific content exploration or unit.

Abacus
Algebra Ball (inflatable)
Algebra Tiles (sets of 35)
Alge-Tiles:
"x" (set/43)
"y" (set/25)
Manual
Alge-Tiles Magnetic (set/86)
Attribute Blocks -GIANT (set/60)
Attribute Blocks-Regular (set/60)
Base Ten Blocks:
cubes, flats, rods, or units
Base Ten Mats (2 sided)
Base Ten Stamps (set/4)
Beakers (tri-pour, set/6)
Bear Counters (set/80)
Calculators
Caliper Bow
Cards (decks of playing cards)
Counters (2 colour/ 2 sided)
Counters (bingo, multi-coloured, circle, overhead)
Counters (bingo, two-coloured, circle, overhead)
Counters (square tiles, multi-coloured)
Cubes (not connecting)
Cuisenaire Rods (set/74)
Dice (soft, large, pair of)
Dice (money, pair of)
Dice (probability, multi-colour)
Dice (regular, dot)
Dominoes (sets/28)
Explorations with Geometric Solids - Manual
Fraction Ball (inflatable)
Fraction Factory (set/51)
Fraction Ring (set/6)
Fraction Strips (set/51)
Fraction Triangles (set/6 layers)
Frameworks - equilateral triangle
Frameworks - hexagons
Frameworks - rectangle
Frameworks - square
Frameworks - pentagons
Geoboards (overhead, 11x11 pin)
Geoboards (opaque, 5x5 pins)
Geolegs
Geometric Solids (wooden, set/15)
Geometric Solids (colour, foam, set/12)
Geometric Solids (transparent, set/14)
Geometry Ball (inflatable)
Graph mat
Hex-a-link Connecting Cubes
Hundreds Wall Chart
(with number/functions cards set)
Links
Measuring Cups (set/3)
Measuring Spoons (set/5)
Measuring Tapes (soft/cloth)
Miras
Mirrors (small, plastic)
Money Set (40 bills/120 coins)
Money Stamps (coins only, set/6)
Number Line Mat (walk on)
Overhead Alge-Tiles (set/136)
Overhead Attribute Blocks (set/30)
Overhead Base 10 Blocks (set/31)
Overhead Cuisenaire Rods (set/60)
Overhead Fraction Circle (set/6 layers)
Overhead Fraction Square (set/6)
Overhead Pattern Blocks (set/49)
Overhead Pentominoes (set/12)
Overhead Safety Compass
Overhead Shape Recognition (set/9)
Overhead Tangrams (set/7)
Pattern Blocks – MAGNETIC (set/200)
Pattern Blocks (set/250)
Pentominoes (scored, set/12)
Percent/Circular Protractor
Platonics with Polydron - Manual
Pre-Algebra Ball (inflatable)
Proofs of Pythagoras (set/3)
Protractors
Safety Compass
Sorting Bowls (set/6 colours)
Sorting Manipulatives:
-Dinosaurs
-Farm Animals
-Fruit
-Insects
-Transportation
Spinners (transparent)
Spinners (colour)
Stacking Pots (nesting, set/6+)
Tangrams (set/7)
Teach-Timer
Timers (sand or tocker, set/3)
Trundle Wheel
Try-it Pentominoes - Manual

