LIST OF HANDS-ON ACTIVITIES IN MATHEMATICS

Mathematics Laboratory

The concept of Mathematics Laboratory has been introduced by the Board in its affiliated schools with the objective of

- Making teaching and learning of the subject interactive, participatory, funfilling and joyful from primary stage of schooling.
- Strengthening the learning of mathematical concepts through concrete materials and hands-on-experiences.
- Relating classroom learning to real life situations and discourage rote and mechanical learning.

Given below is the list of activities to be done by the students in classes VII during each academic year.

GRADE 7

Activity 1: To represent the following products of decimal numbers on a square by drawing horizontal/ vertical lines and shading

i) 0.3 x 0.7
ii) 0.5 x 0.5

Activity 2: To compare the marks obtained in all the subjects by a student in the first and second term examination by drawing a bar graph using paper cutting and pasting.

Activity 3:(a) Identify the conditions under which given pair of angles are complimentary.
(b) Identify the conditions under which given pair of angles are supplementary.

Activity 4: To verify that if two lines intersect at a point, then each pair of vertically opposite angles are equal by paper cutting and pasting.

Activity 5: To verify that if two parallel lines are cut by a transversal, then
i) each pair of corresponding angles are equal
ii) each pair of alternate interior angles are equal

iii) each pair of interior angles on the same side of transversal are supplementary

by paper cutting and pasting.

Activity 6: (a) To get a median of a triangle from any vertex, by paper folding. To verify that in a triangle, medians pass through a common point, by paper folding.

(b) To get an altitude of a triangle from any vertex, by paper folding. To verify that in a triangle altitudes pass through a common point, by paper folding.

(Note: - Teacher may take different types of triangles classified on the basis of sides and angles)

Activity 7: (a) To verify that the sum of all interior angles of a triangle is 180^0 by paper cutting and pasting.

(b) To verify that an exterior angle of a triangle is equal to the sum of the two interior opposite angles by paper cutting and pasting.

Activity 8: To verify that a triangle can be drawn only if the sum of lengths of any two sides is greater than the third side, using broom sticks.
Set 1: 5 cm, 7 cm, 11 cm
Set 2: 5 cm, 7 cm, 14 cm

Activity 9: To verify Pythagoras theorem using a squared paper by shading the squares.

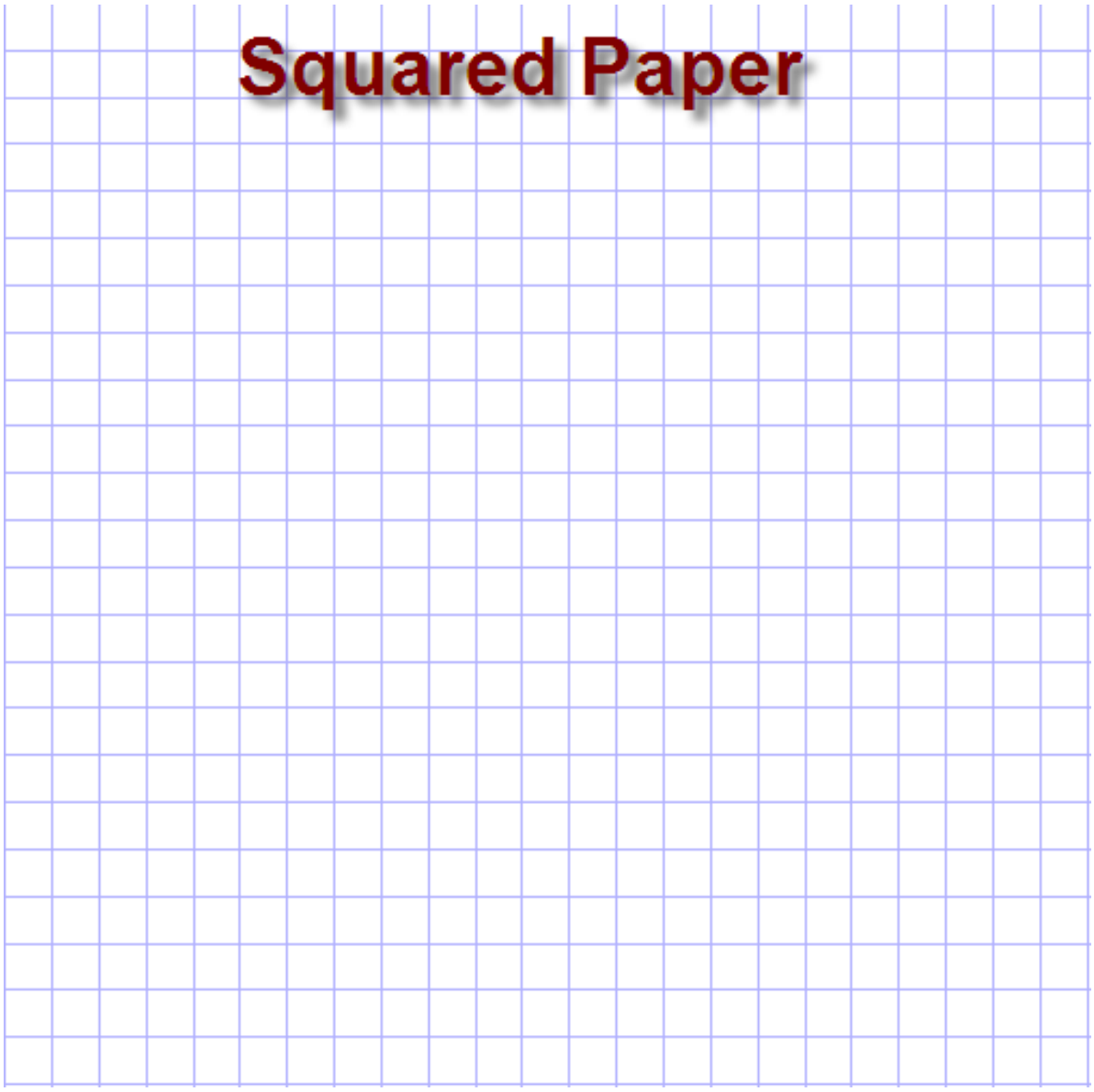
Activity 10: (a) To draw a cube with an edge 5 cm long on an isometric dot paper. Also draw its oblique sketch.

(b) To draw a cuboid of dimension 7 cm, 4 cm and 2 cm on an isometric dot paper. Also draw its oblique sketch.

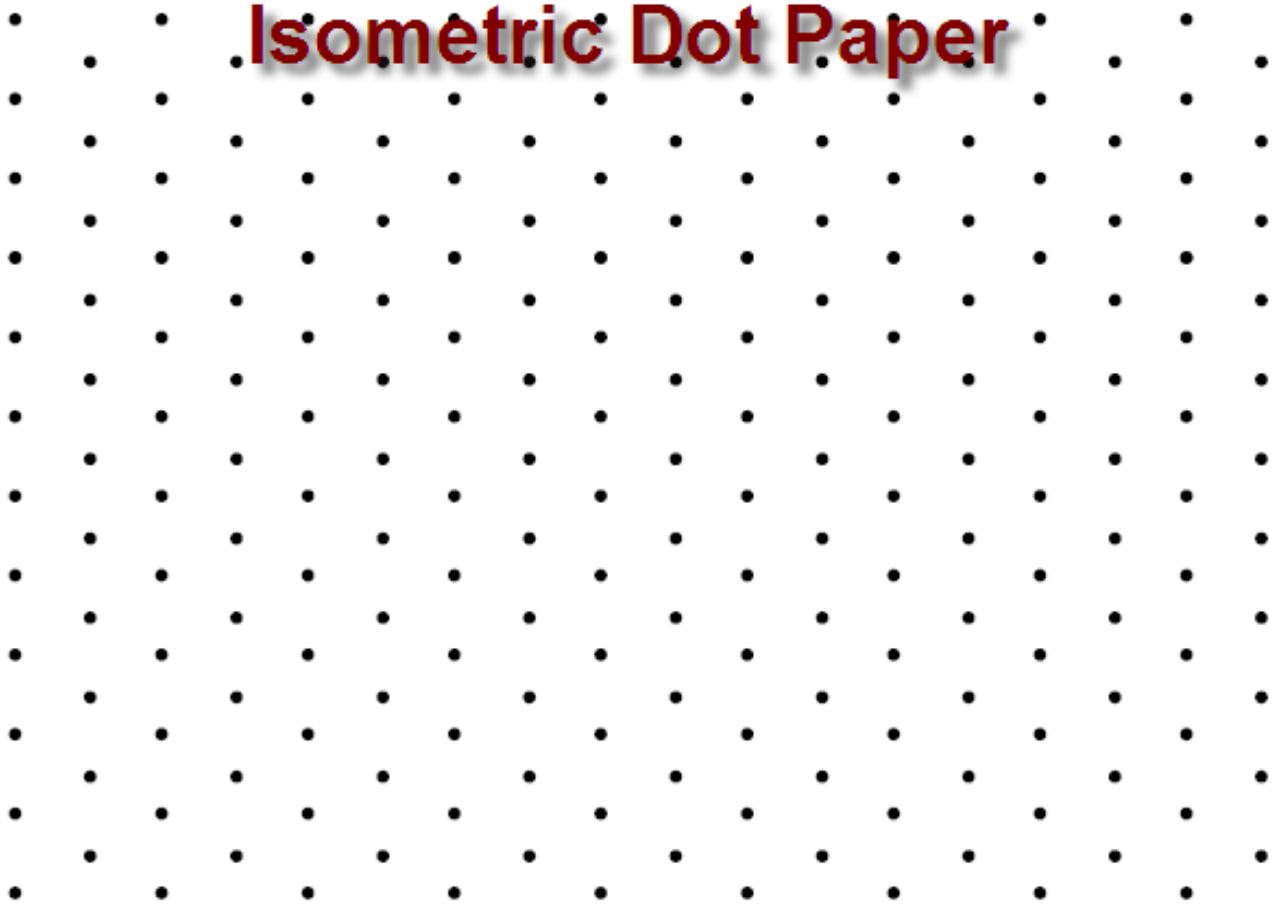
List of materials for performing activities in Mathematics Lab

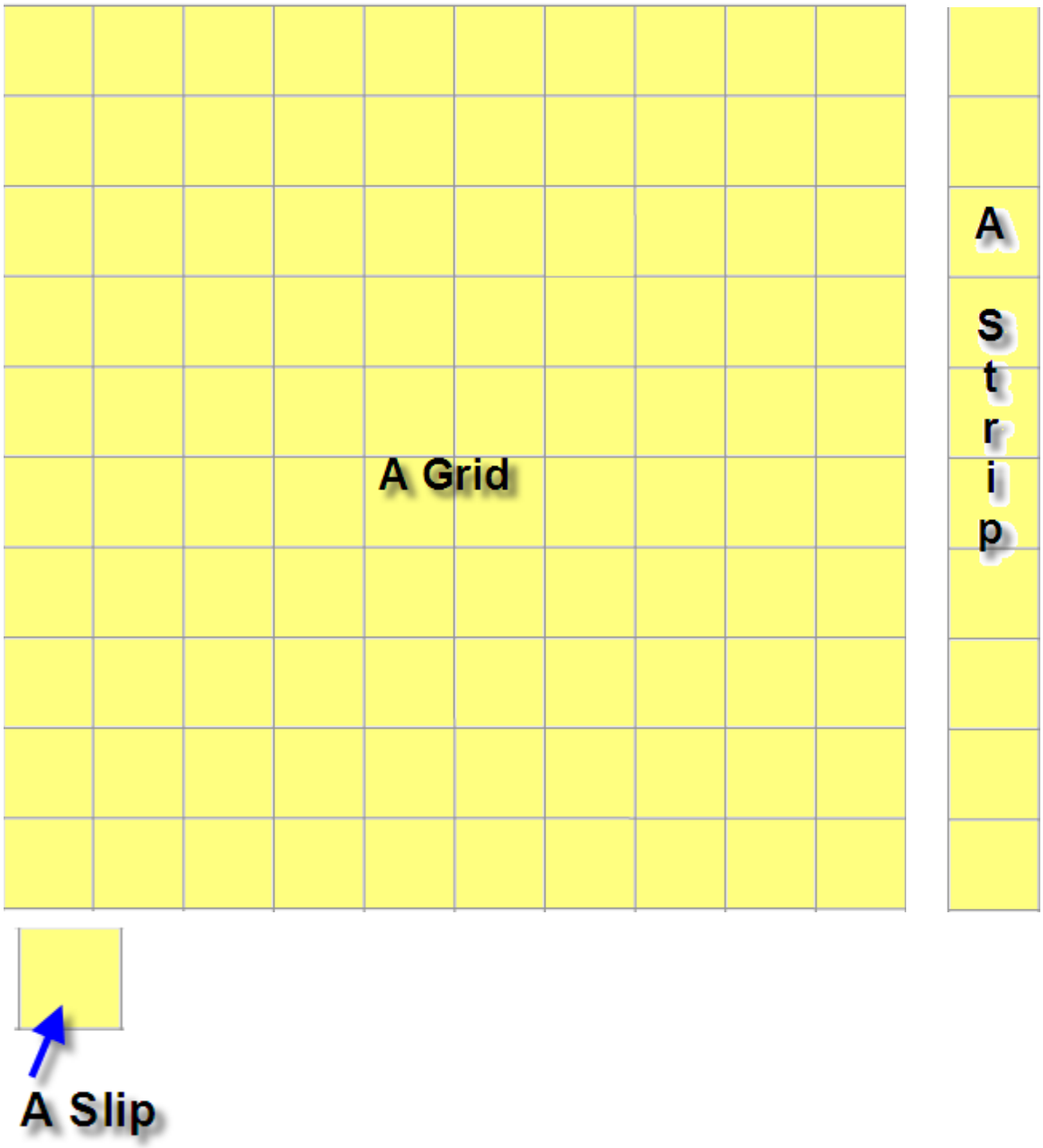
- Coloured paper/ origami paper
- Pairs of angle cut-outs
- Pair of scissors
- Glue
- Triangular cut out
- Broom sticks
- Squared paper
- Circular cut-outs

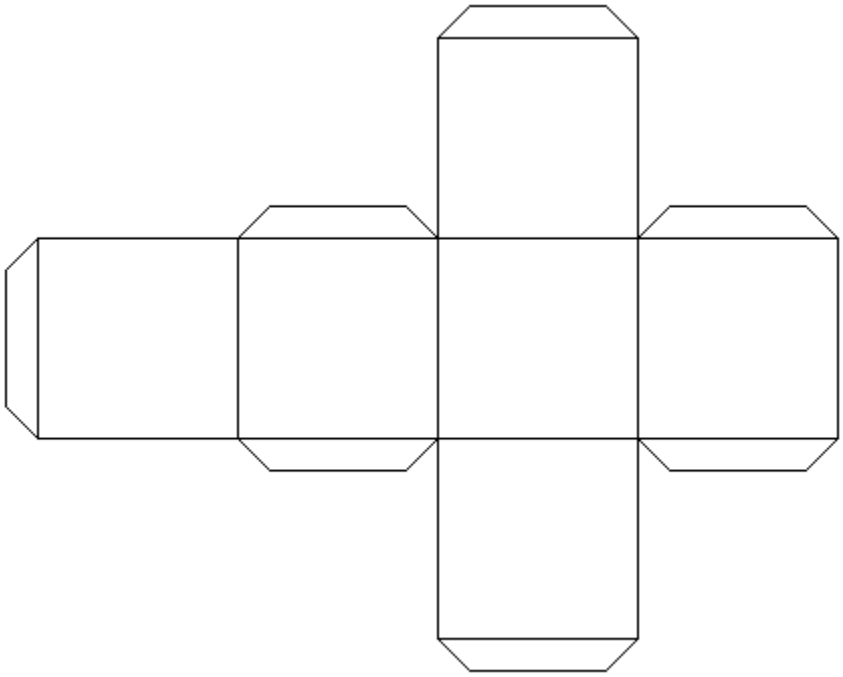
- Grid paper
- Strips and slip
- Rectangular paper
- Squared paper
- Isometric Dot paper
- Unit cubes of dimension 1x1x1



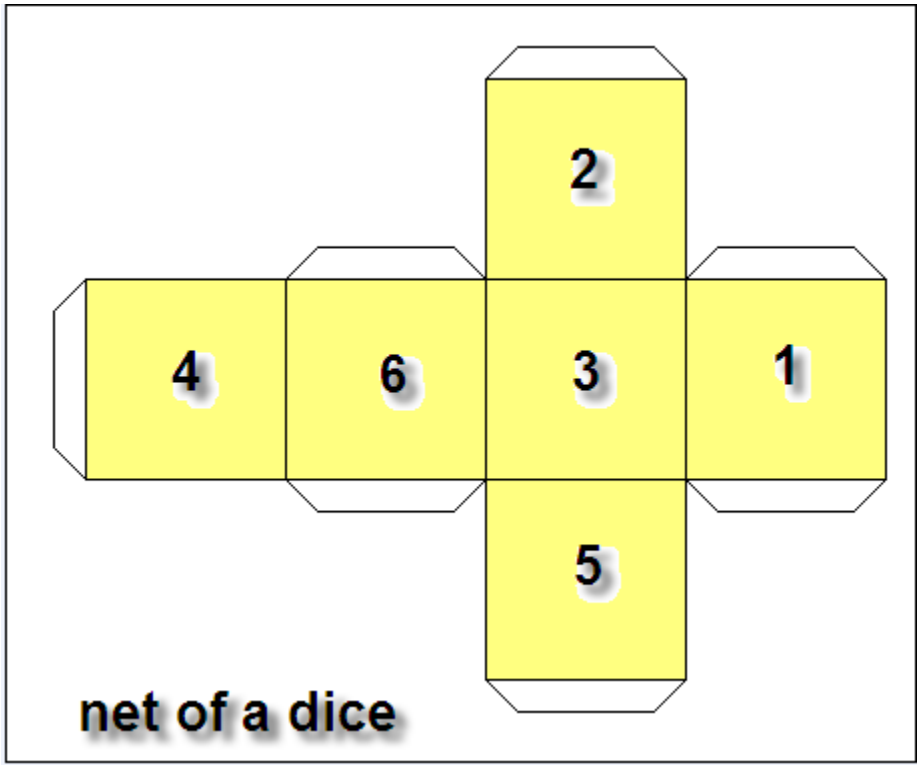
Isometric Dot Paper



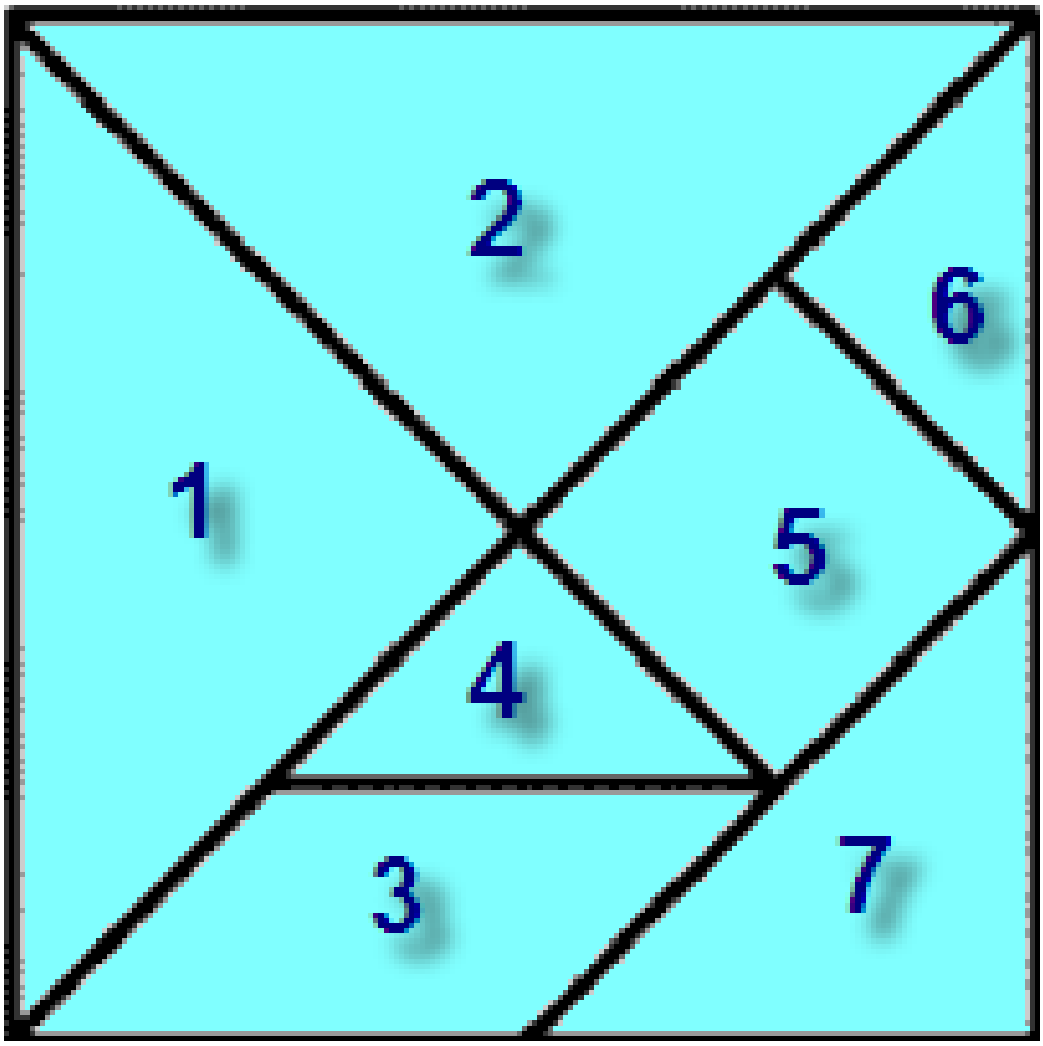

A Grid
A Strip
A Slip



Net of a cube



Tangram



Tangram on 8 X 8 Squared paper