

Math bag of puzzles



The game Math bag of puzzles was created within the project SciMaG - Science&Math educational games from preschool to university. The project is co-funded by the Erasmus+ Program of the European Union, KA220-SCH – Cooperation partnerships in school education (023-1-HR01-KA220-SCH-000165485).



Co-funded by
the European Union

About the game

In front of you is a Math bag of puzzles that contains many different puzzles for adults and children.

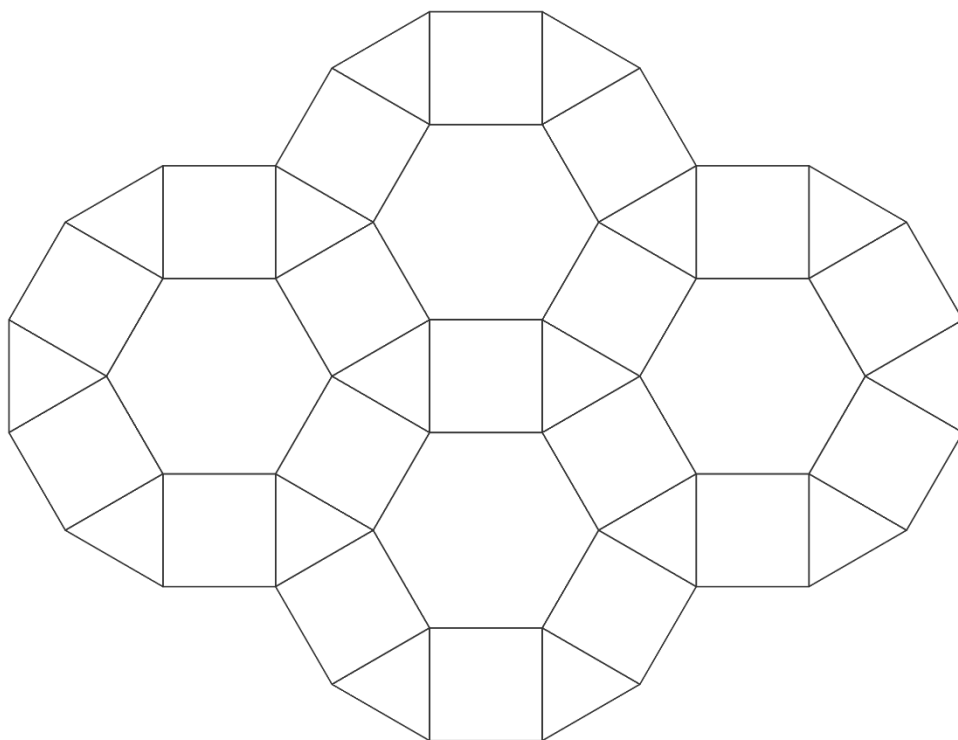
We are sure that each of you will find your own creative way of arranging them and that you will create all kinds of interesting shapes.

This booklet lists just some of the possible activities that involve the puzzles in front of you.

Enjoy the puzzles!

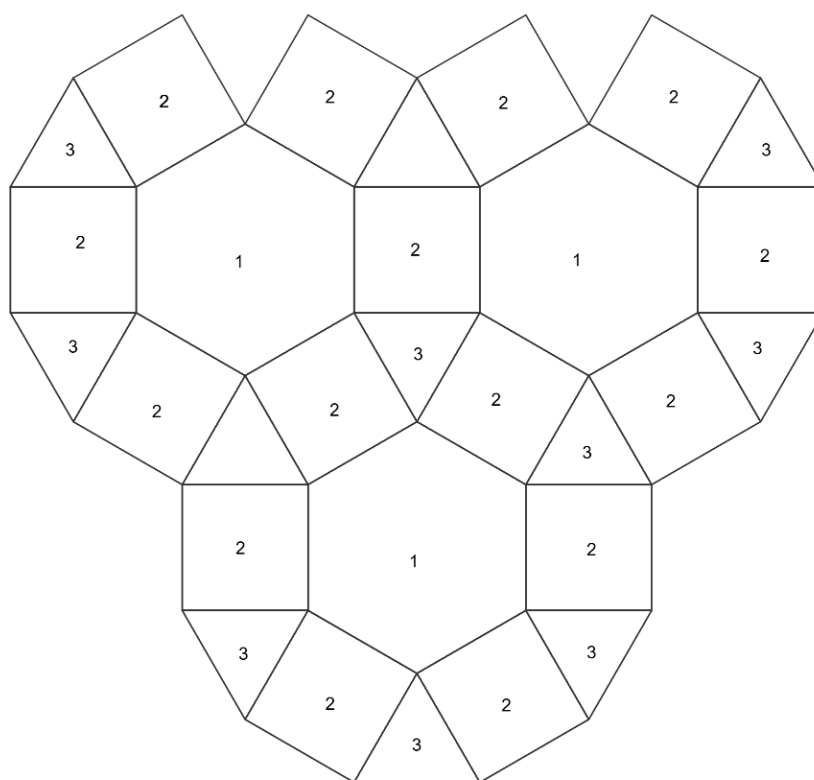
ARCHIMEDES PUZZLES

Find the tiles
you need and
arrange the
pattern shown
in the picture!



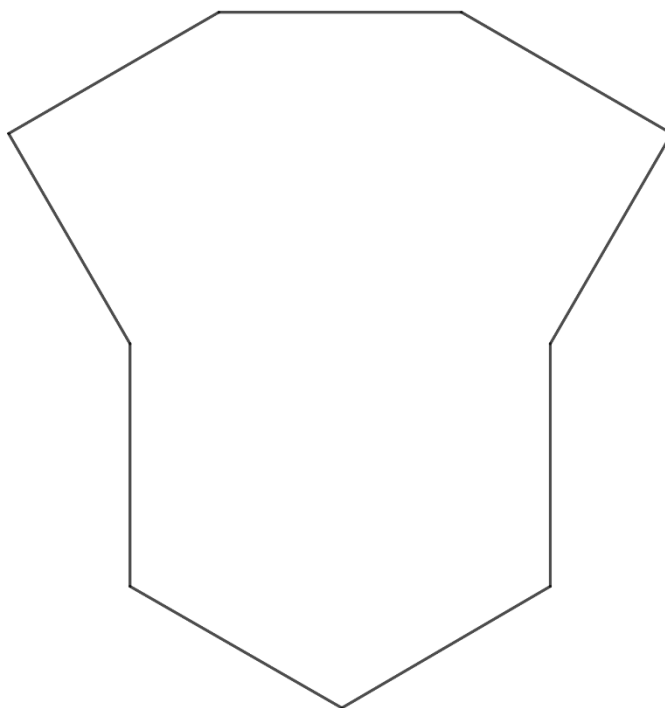
Find the tiles of
the right color and
arrange the
pattern shown in
the picture!

- 1 – red color
- 2 – blue color
- 3 – wood color

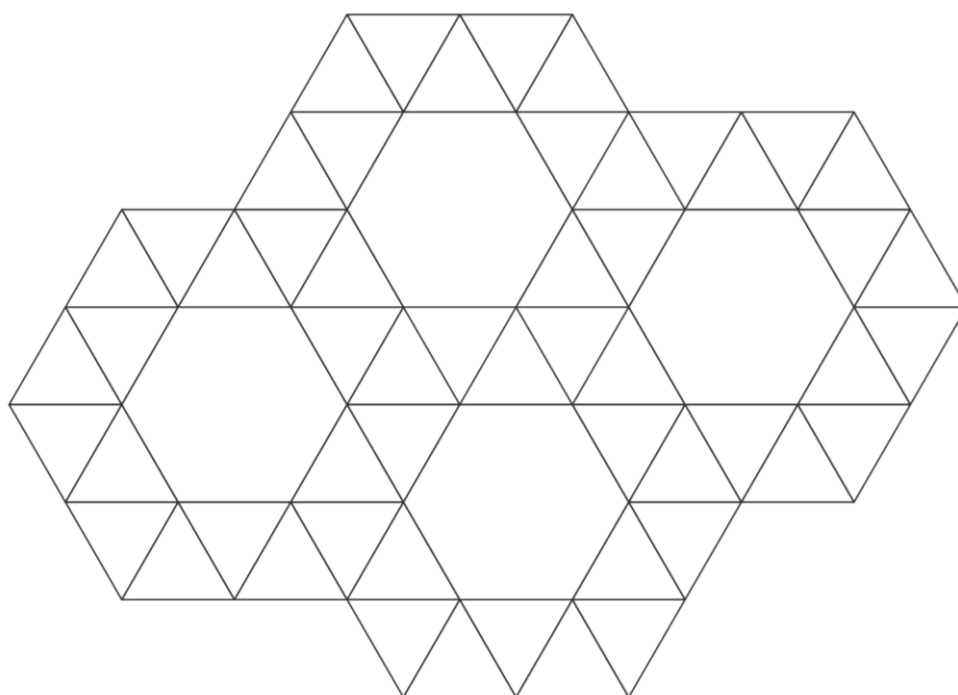


Find the tiles you need by arranging the pattern of the shape shown in the picture.

Watch out: all your tiles must meet in exactly one vertex!

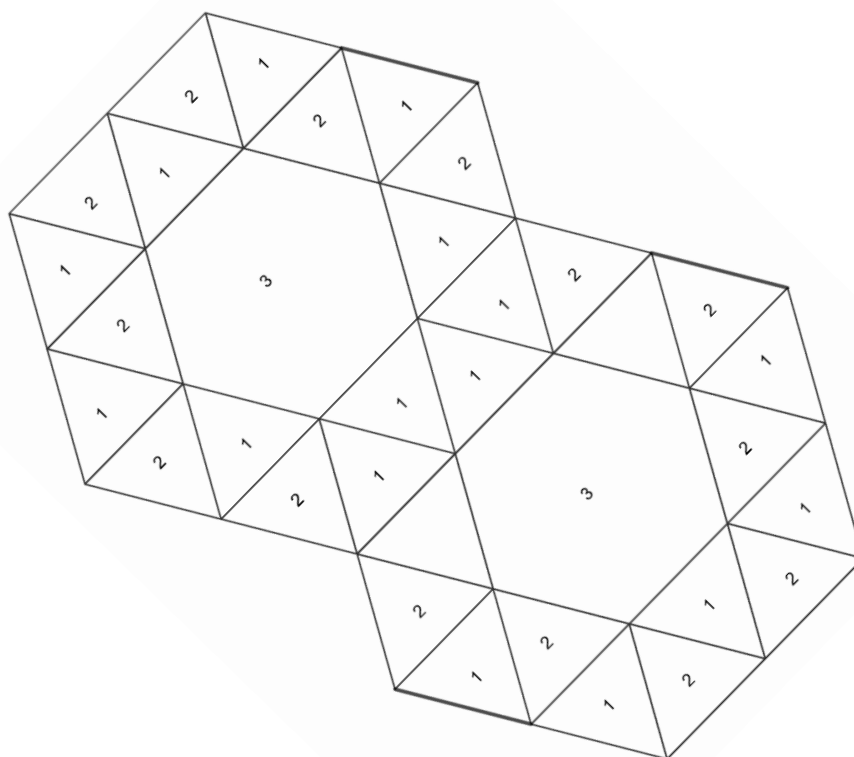


Find the tiles
you need and
arrange the
pattern shown
in the picture!



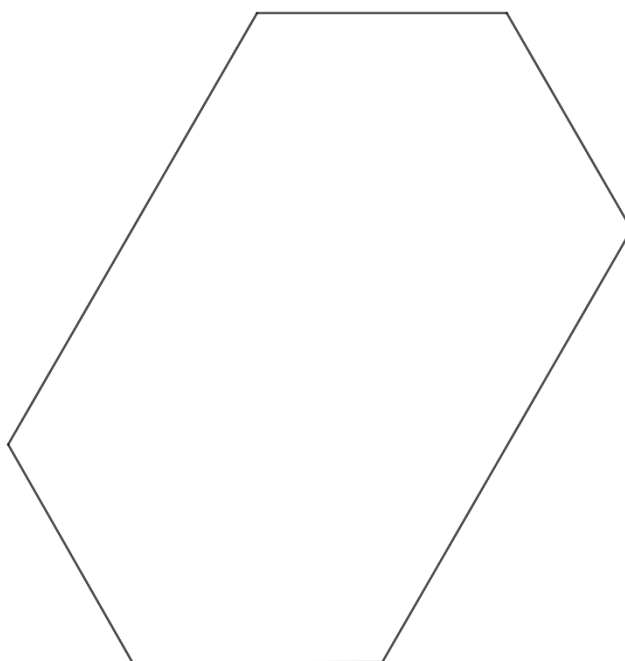
Find the tiles of
the right color and
arrange the
pattern shown in
the picture!

- 1 – blue color
- 2 – wood color
- 3 – red color

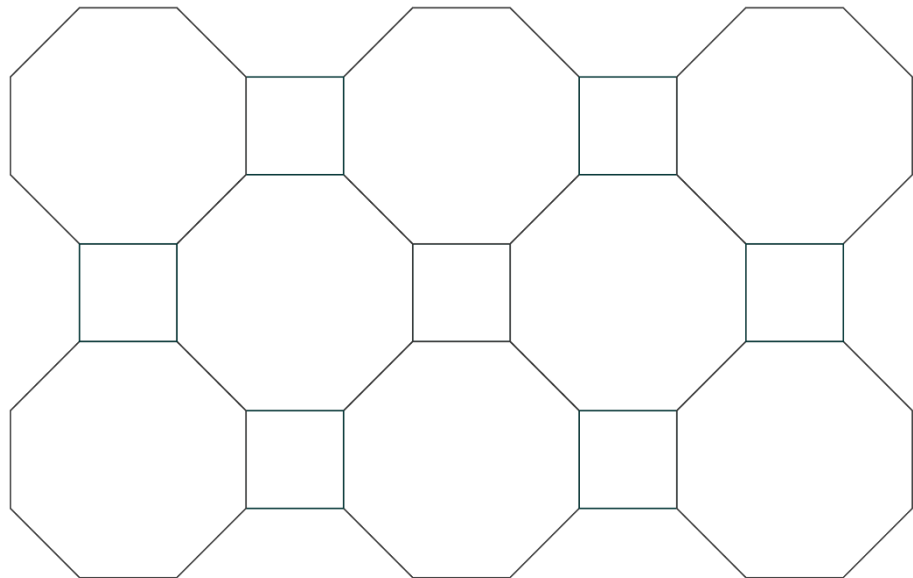


Find the tiles you need by arranging the pattern of the shape shown in the picture.

Watch out: all your tiles must meet in exactly one vertex!

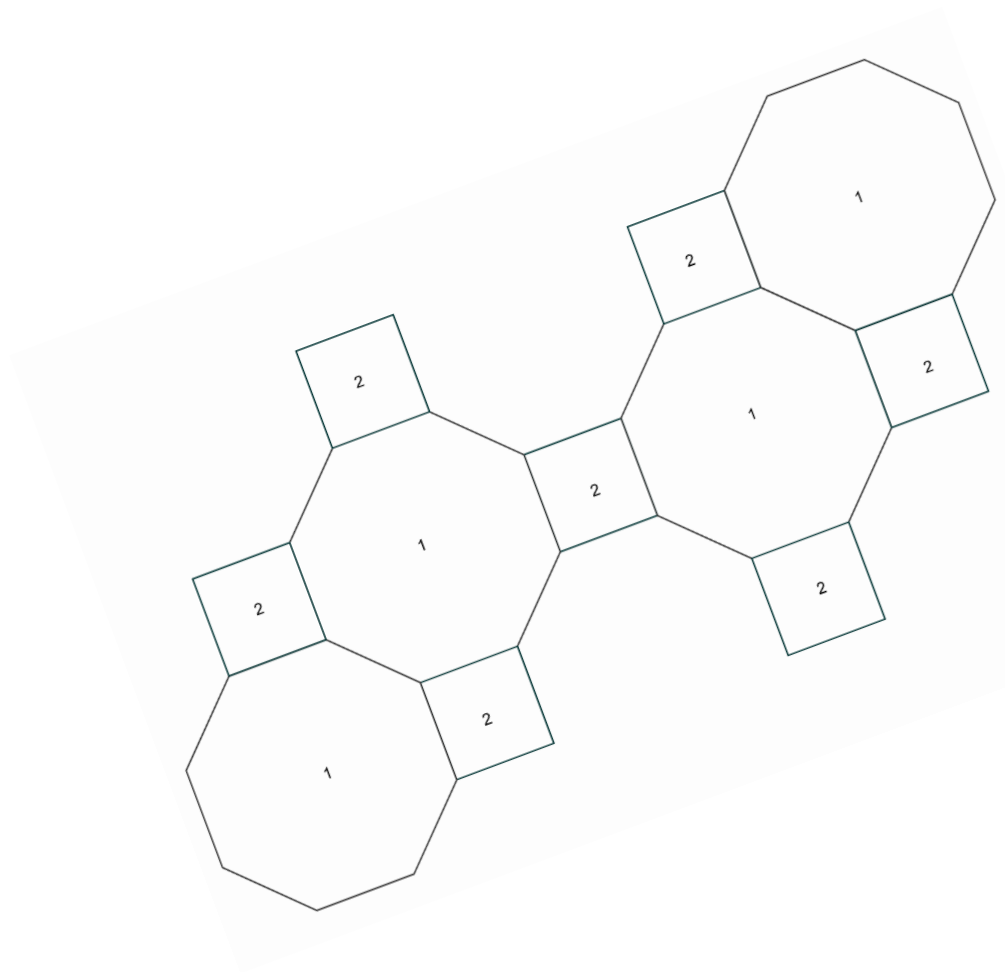


Find the tiles you
need and arrange
the pattern shown
in the picture!

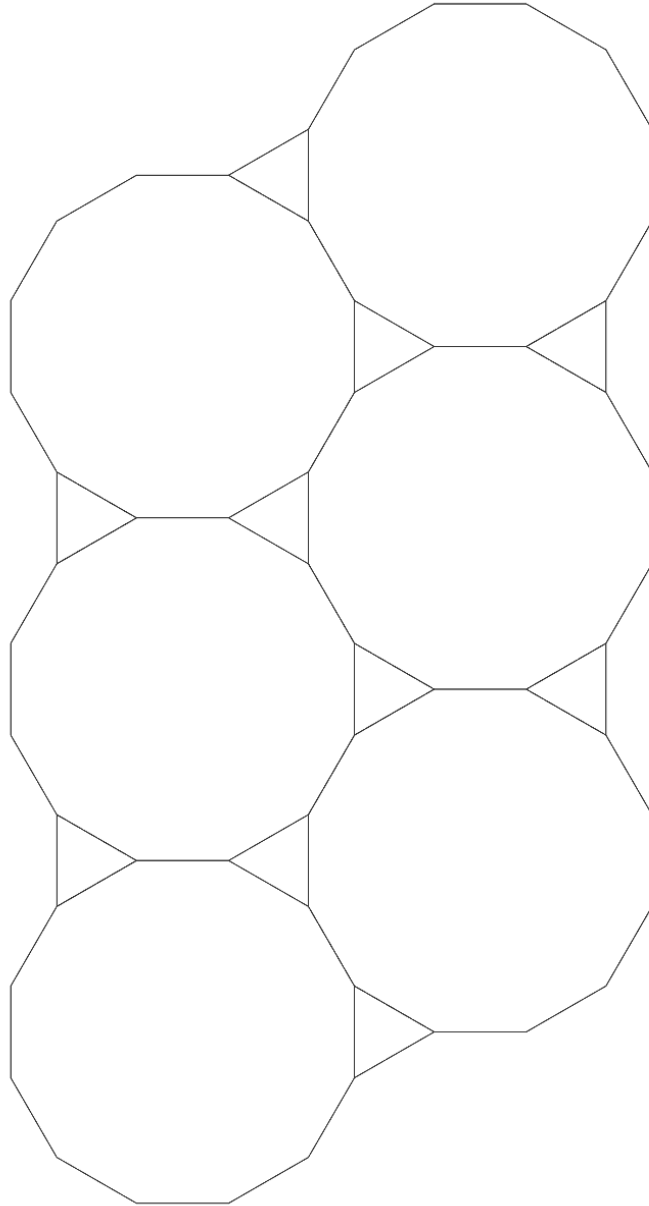


Find the tiles of
the right color and
arrange the
pattern shown in
the picture!

1 – red color
2 – wood color

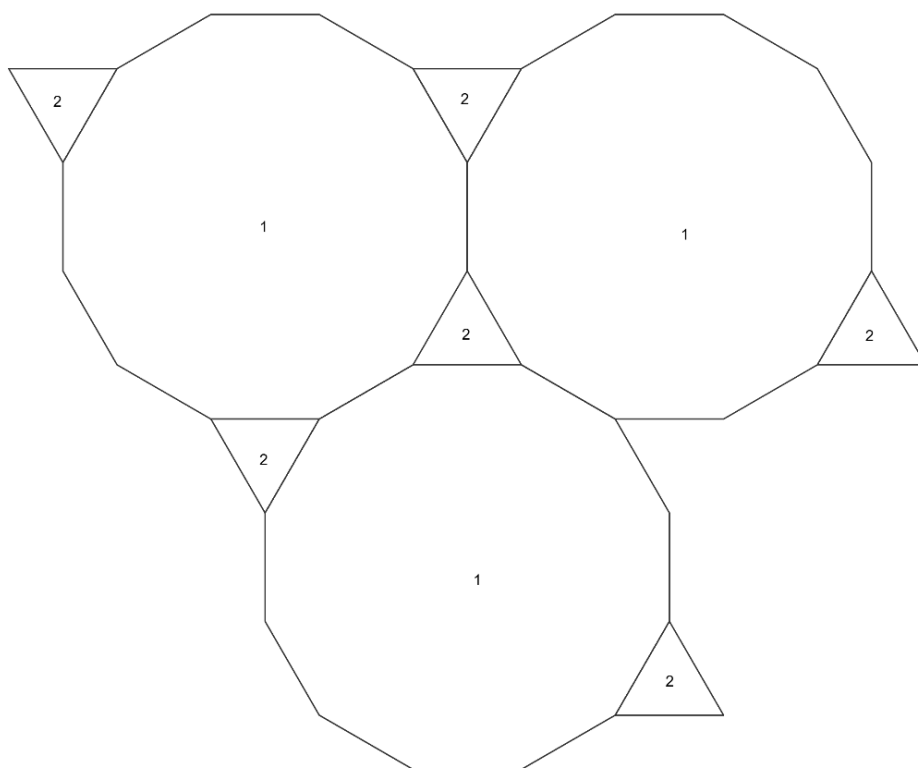


Find the tiles you
need and arrange
the pattern shown
in the picture!



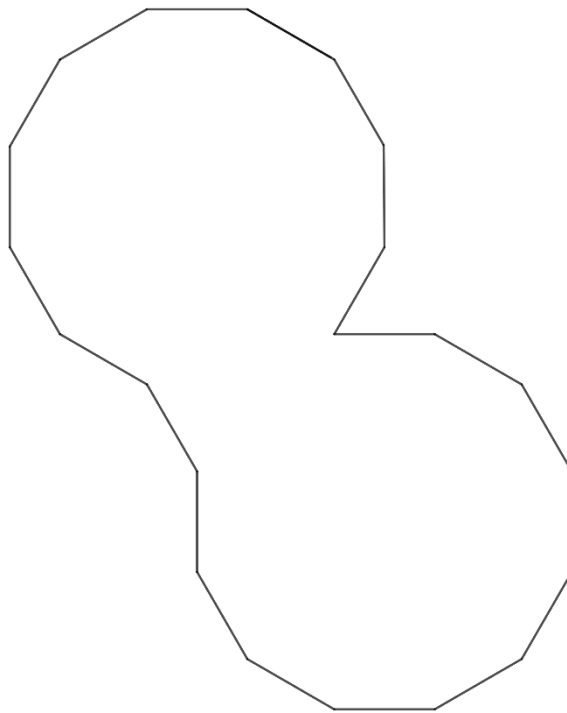
Find the tiles of
the right color and
arrange the
pattern shown in
the picture!

1 – red color
2 – blue color

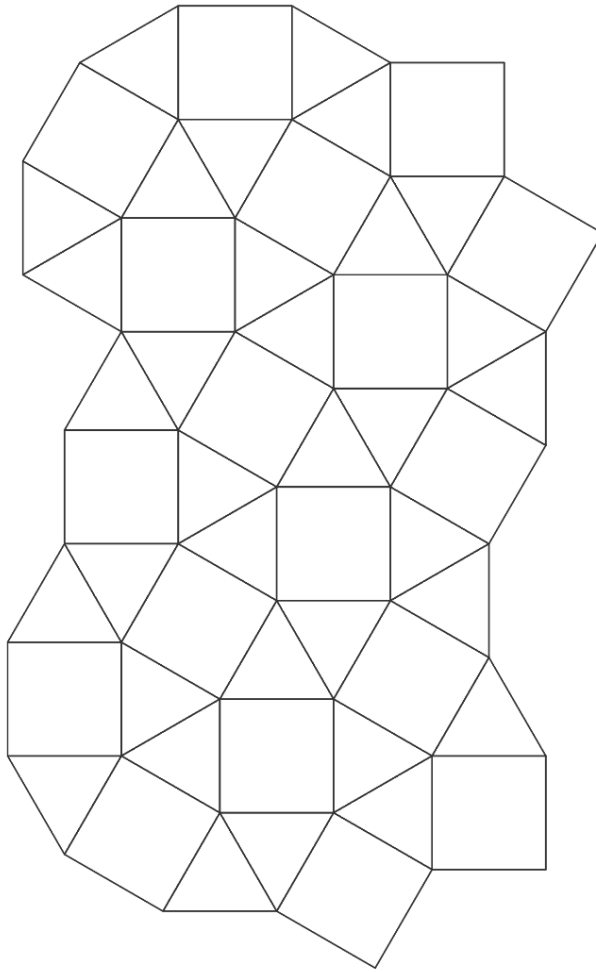


Find the tiles you need by arranging the pattern of the shape shown in the picture.

Watch out: all your tiles must meet in exactly one vertex!

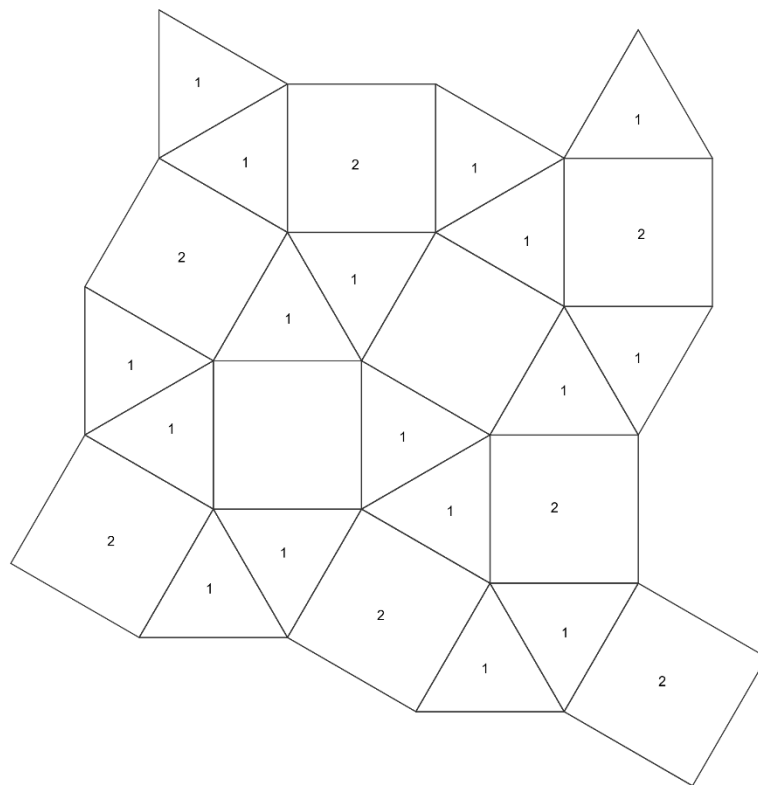


Find the tiles you
need and arrange
the pattern shown
in the picture!



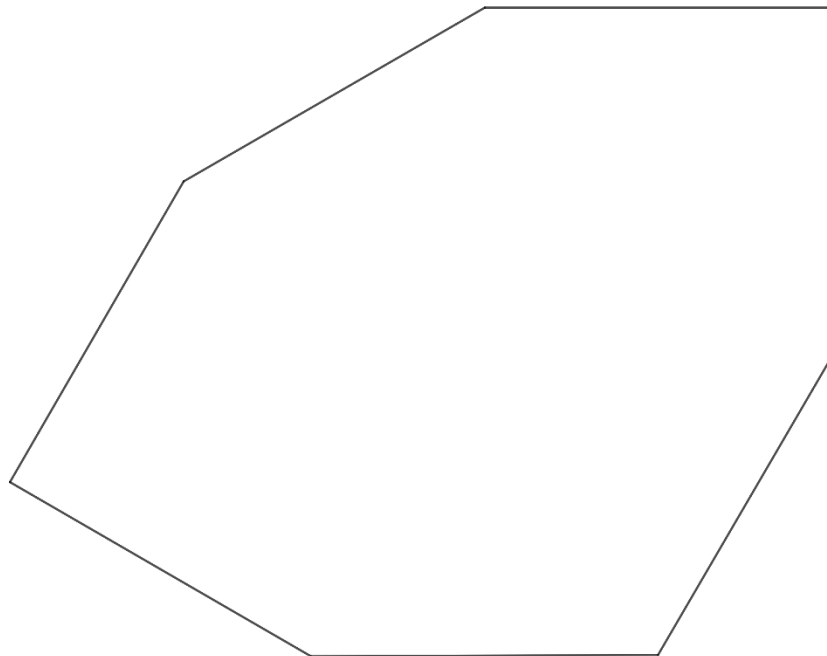
Find the tiles of
the right color and
arrange the
pattern shown in
the picture!

1 – wood color
2 – red color

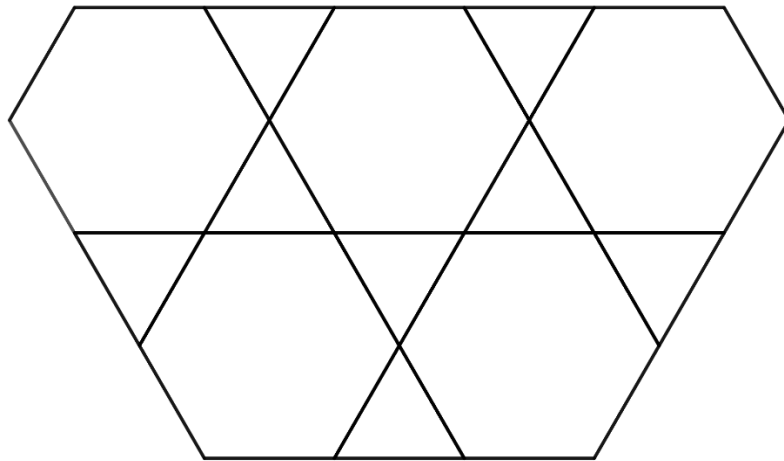


Find the tiles you need by arranging the pattern of the shape shown in the picture.

Watch out: all your tiles must meet in exactly one vertex!

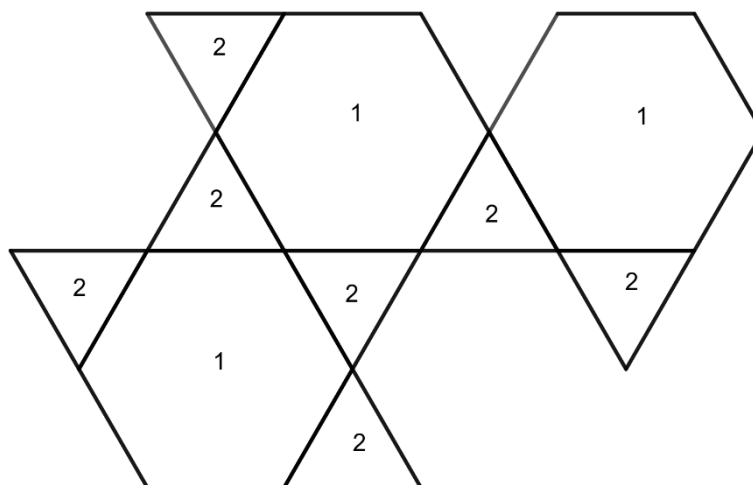


Find the tiles you
need and arrange
the pattern shown
in the picture!



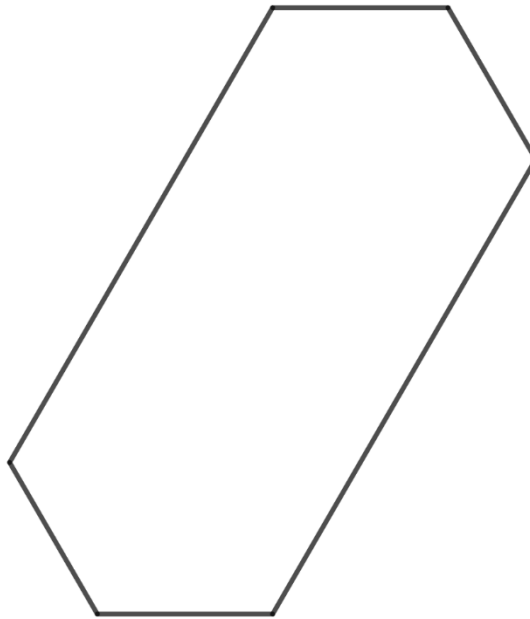
Find the tiles of
the right color and
arrange the
pattern shown in
the picture!

1 – red color
2 – wood color

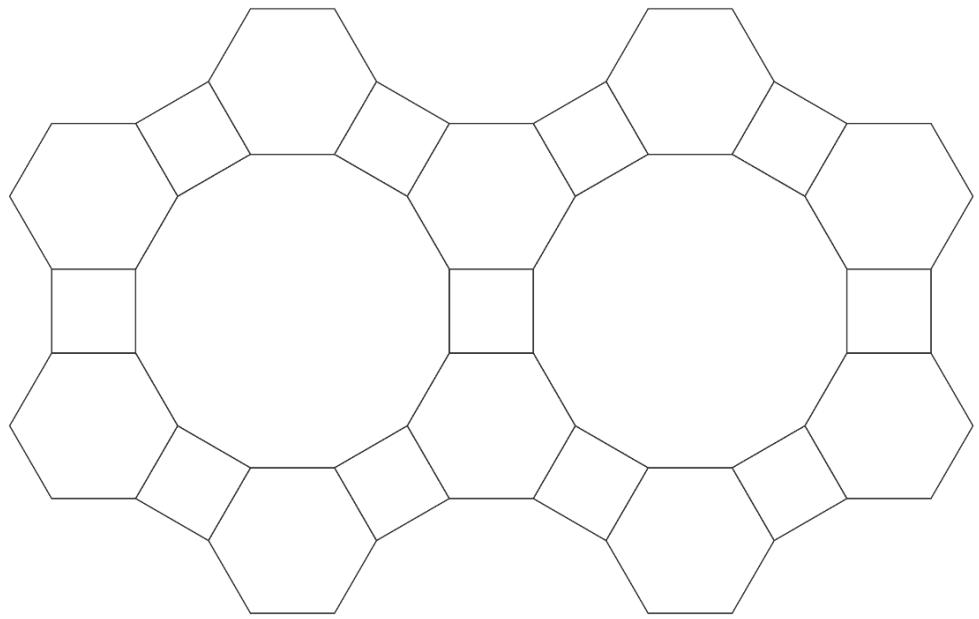


Find the tiles you need by arranging the pattern of the shape shown in the picture.

Watch out: all your tiles must meet in exactly one vertex!

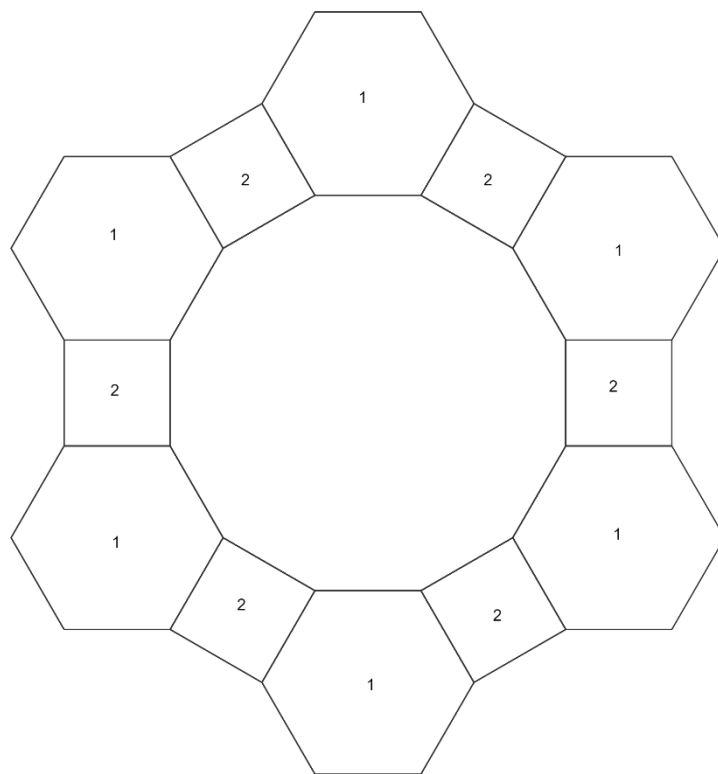


Find the tiles you
need and arrange
the pattern shown
in the picture!



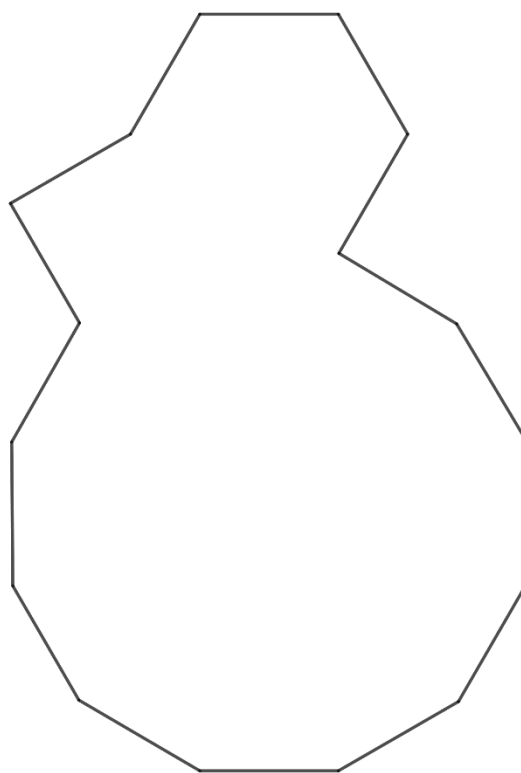
Find the tiles of
the right color and
arrange the
pattern shown in
the picture!

1 – red color
2 – blue color

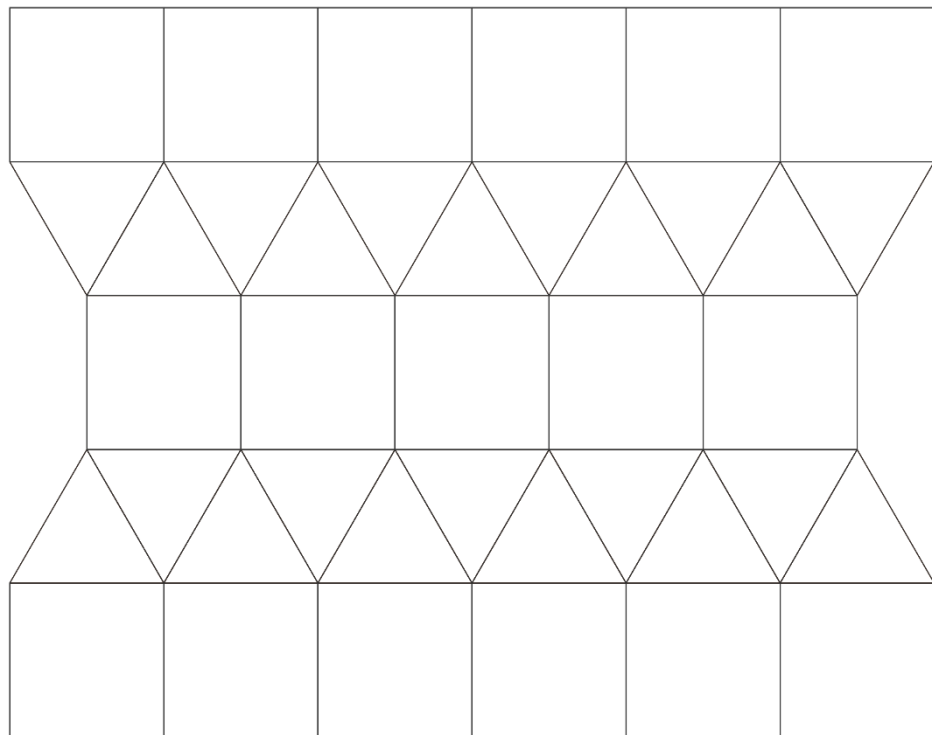


Find the tiles you need by arranging the pattern of the shape shown in the picture.

Watch out: all your tiles must meet in exactly one vertex!

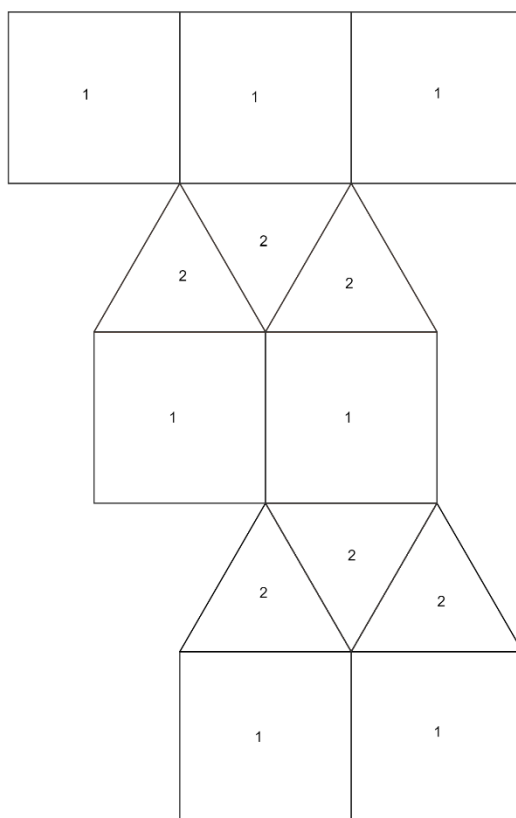


Find the tiles you
need and arrange
the pattern shown
in the picture!



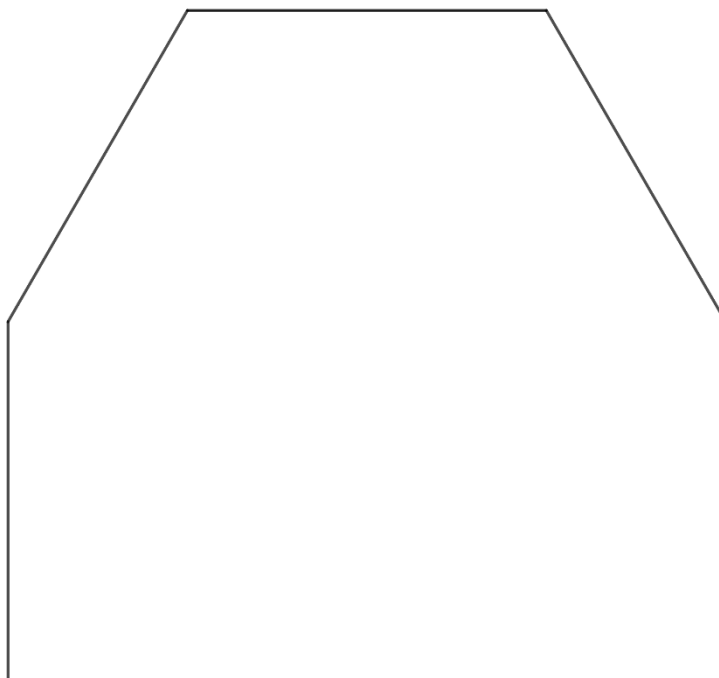
Find the tiles of
the right color and
arrange the
pattern shown in
the picture!

1 – wood color
2 – blue color



Find the tiles you need by arranging the pattern of the shape shown in the picture.

Watch out: all your tiles must meet in exactly one vertex!



ARCHIMEDES PUZZLE

Find the tiles and
complete the
puzzle!

FIND:

- wood-colored frame (12 parts),
- 52 hexagons.

Arrange the frame in the shape of a square and fill it with the
selected tiles.

Find the tiles and
complete the
puzzle!

FIND:

- red frame (14 parts),
- 6 dodecagons
- 16 hexagons
- 18 squares.

Arrange the frame in the shape of a square and fill it with the
selected tiles.

Find the tiles and
complete the
puzzle!

FIND:

- yellow frame (12 parts),
- 20 hexagons,
- 62 squares,
- 43 triangles.

Arrange the frame in the shape of a square and fill it with the
selected tiles.

Find the tiles and
complete the
puzzle!

FIND:

- green frame (16 parts),
- 8 dodecagons,
- 28 triangles.

Arrange the frame in the shape of a square and fill it with the
selected tiles.

Find the tiles and
complete the
puzzle!

FIND:

- black frame (13 parts),
- 32 hexagons,
- 66 triangles.

Arrange the frame in the shape of a square and fill it with the
selected tiles.

Find the tiles and
complete the
puzzle!

FIND:

- purple frame (12 parts),
- 69 quadrilaterals,
- 134 triangles.

Arrange the frame in the shape of a square and fill it with the
selected tiles.

Find the tiles and
complete the
puzzle!

FIND:

- light purple frame (11 parts),
- 25 octagons,
- 16 quadrilaterals.

Arrange the frame in the shape of a square and fill it with the
selected tiles.

Find the tiles and
complete the
puzzle!

FIND:

- blue frame (9 parts),
- a few handfuls of squares,
- a few handfuls of triangles.

Arrange the frame in the shape of a square and fill it with the
selected tiles.

Find the tiles and
complete the
puzzle!

FIND:

- pink frame (8 parts),
- 18 hexagons,
- a few handfuls of triangles (179 triangles).

Arrange the frame in the shape of a square and fill it with the
selected tiles.

ARCHIMEDES PUZZLE WITH PICTURES

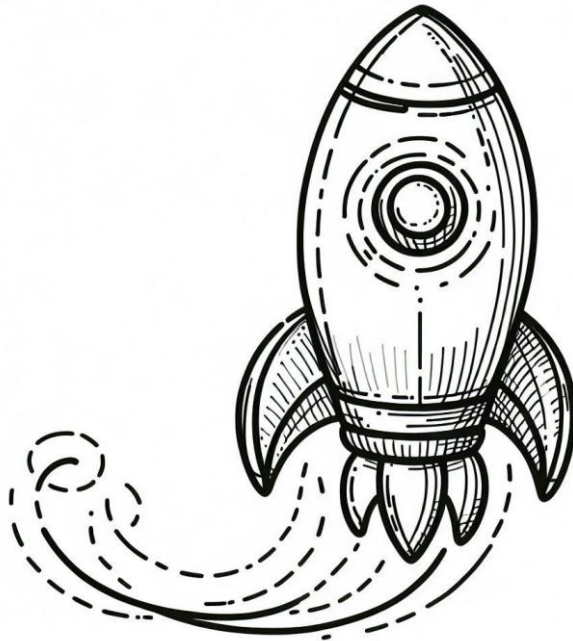
Find the tiles and
complete the
puzzle!

FIND:

- red frame (14 parts),
- all red tiles (40 pieces)

Arrange the square frame and fill it with the selected tiles to
create the following picture.

Be careful: arrange the puzzle so that the red color is on the
bottom!



Find the tiles and
complete the
puzzle!

FIND:

- green frame (16 parts),
- all green tiles (40 pieces)

Arrange the square frame and fill it with the selected tiles to
create the following picture.

Be careful: arrange the puzzle so that the green color is on
the bottom!



Find the tiles and
complete the
puzzle!

FIND:

- purple frame (12 parts),
- all purple tiles (198 pieces)

Arrange the square frame and fill it with the selected tiles to
create the following picture.

Be careful: arrange the puzzle so that the purple color is on
the bottom!



festival**znanosti**

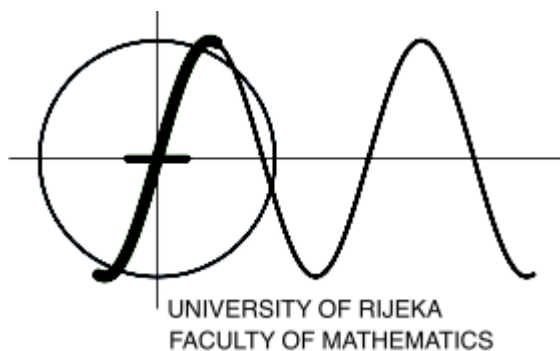
Find the tiles and
complete the
puzzle!

FIND:

- light purple frame (11 parts),
- all light purple tiles (39 pieces)

Arrange the square frame and fill it with the selected tiles to
create the following picture.

Be careful: arrange the puzzle so that the light purple color is
on the bottom!



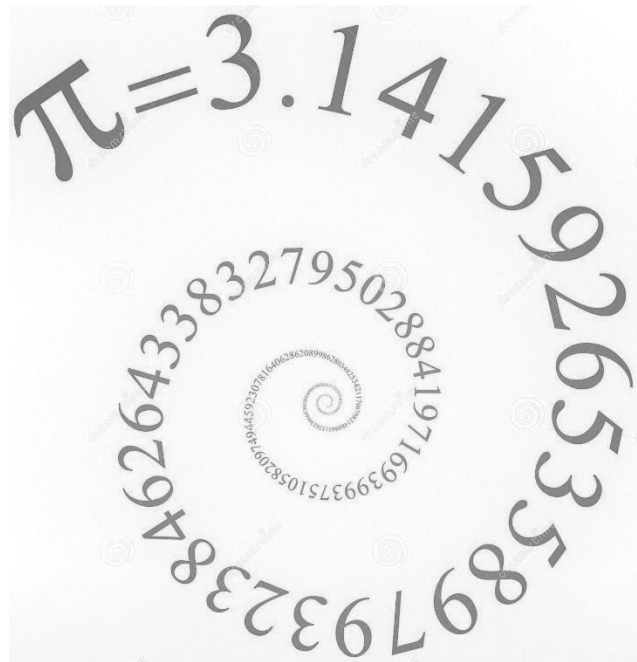
Find the tiles and
complete the
puzzle!

FIND:

- yellow frame (12 parts),
- all yellow tiles (125 pieces)

Arrange the square frame and fill it with the selected tiles to
create the following picture.

Be careful: arrange the puzzle so that the yellow color is on
the bottom!



Find the tiles and
complete the
puzzle!

FIND:

- black frame (13 parts),
- all black tiles (98 pieces)

Arrange the square frame and fill it with the selected tiles to
create the following picture.

Be careful: arrange the puzzle so that the black color is on
the bottom!



ARCHIMEDES PUZZLES WITH CURVES

Find the tiles with
curves and
arrange them!

Arrange the tiles one after another so that they follow the
curve of one color.

Find the tiles with
curves and
arrange them!

Arrange the tiles one after another so that they follow the
curves in all three colors.

Find the tiles with
curves and
arrange them!

Choose only tiles that are hexagonal in shape. Arrange the tiles one after the other so that they follow the curve in all three colors and so that one tile touches at least two other tiles.

Find the tiles with
curves and
complete the
puzzle!

FIND:

- wood-colored frame (12 parts),
- 52 hexagons with curves,

Arrange the frame in the shape of a square and fill it with the
selected tiles by following the curve in one color.

Find the tiles with
curves and
complete the
puzzle!

FIND:

- wood-colored frame (12 parts),
- 52 hexagons with curves,

Arrange the frame in the shape of a square and fill it with the
selected tiles so that you follow the curve in all colors.

Find the tiles with
curves and
complete the
puzzle!

FIND:

- yellow frame (12 parts),
- 20 hexagons with curves,
- 62 squares with curves,
- 43 triangles with curves.

Arrange the frame in the shape of a square and fill it with the
selected tiles by following the curve in one color.

Find the tiles with
curves and play
with your friends!

This game is played by 3 players.

When it is his turn, the player places a tile so that it continues
the curve in his color.

Once players have exhausted all moves or all tiles, the winner
is the player whose curve is the longest.

ESCHER PUZZLES

A fish bites
another fish's tail

FIND:

- silver edge,
- 18 silver fish,
- 18 green fish

Arrange the frame in the shape of a square and fill it with the selected tiles

Teddy bear

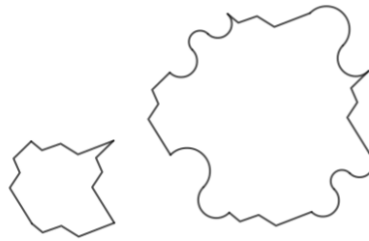
FIND:

- light green edge (4 pieces)
- 11 light green teddy bears

Arrange the frame in the shape of a square and fill it with the selected tiles

Escher (4,8,8)
puzzles

FIND a puzzle of this shape.



Find the corresponding edge.

Arrange the frame in the shape of a square and fill it with the
selected tiles

PUZZLES (AREA AND VOLUME)

Find the tiles and
arrange them!

FIND:

- 10 squares.

Assemble a geometric figure with an area of 90 cm^2 .

Find the tiles and
arrange them!

FIND:

- 6 triangles.

Assemble a geometric figure with a perimeter of 18 cm.

Find 3D elements
and arrange them!

FIND:

- 8 different 3D shapes, each with a volume of 4.

Assemble a cuboid with height 2 and volume 32.

Be careful: all 3d shapes are composed of unit cubes.