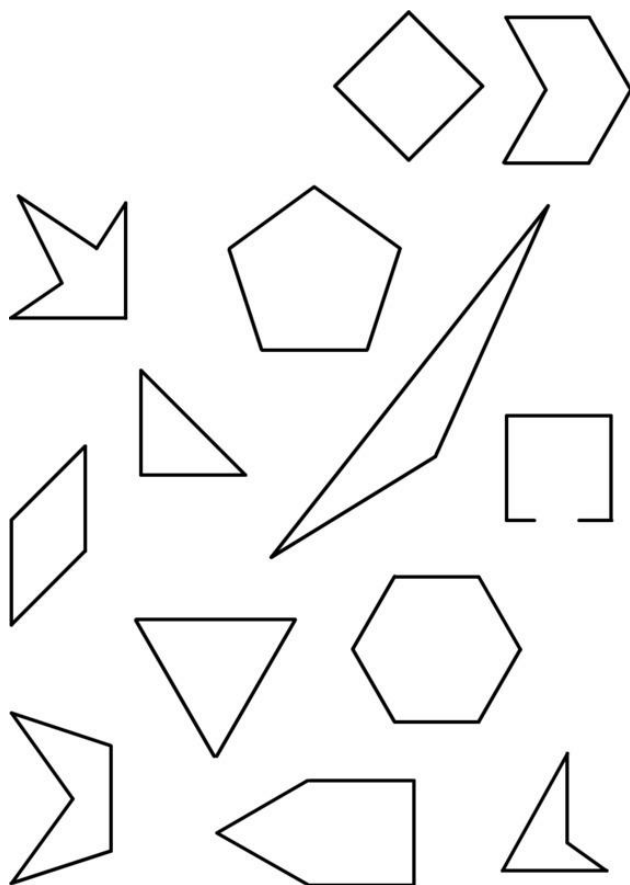**school nova** ™

1.

a) Color the inside of all the triangles blue.
b) Color the inside of all the quadrilaterals red.
c) Color the inside of all the pentagons orange.
d) Color the inside of all the hexagons green.
e) Circle all the shapes that have sides that are equal.

2.   Draw a shape with 3 line segments that is not a triangle.

3.

    a) Draw a right isosceles triangle $\triangle ABC$

    b) Draw a obtuse isosceles triangle $\triangle PQR$
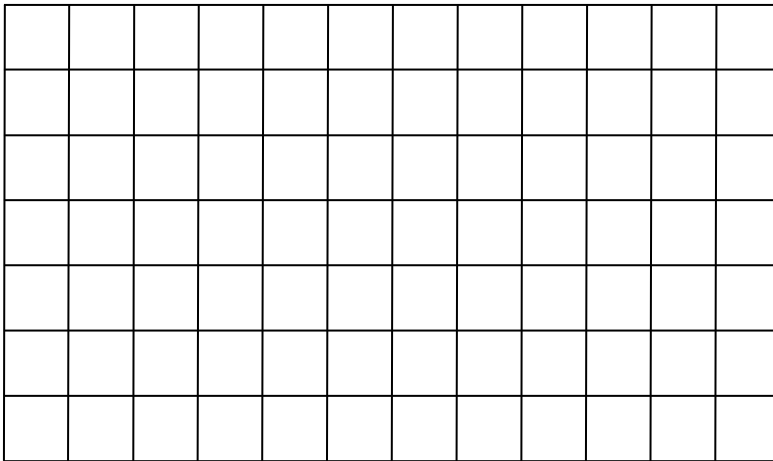
4.

    a) Draw at least two examples of each of the quadrilaterals defined below.

- **Parallelogram:** A quadrilateral with 2 pairs of parallel sides.
- **Rectangle:** A parallelogram with 4 right angles.
- **Rhombus:** A parallelogram with 4 sides with equal length.

b) I am a shape that is a parallelogram, a rectangle, and at the same time a rhombus. What shape am I? Draw a diagram of what I look like. Use the vocabulary words and their definitions given in part (a) to explain what shape I am.

_____

_____

5. Draw a square on the square ruled piece of paper below, such as that if the square is divided into two quadrilaterals, the perimeter of one of them will be 8 cm and the perimeter of another one will be 12 cm (consider that the length of 2 cells equals 1 cm). Find the perimeter of the square.

6. Solve for x and check your answers:

$$x + 23 = 100 - 62$$

$$85 - x = 42 + 45$$

_____   _____

_____   _____

_____   _____

7. The table below consists of 8 columns and 6 rows. Is it possible to place check mark symbols in such a way:

    a) to get 4 check marks in each row and 3 check marks in each column?
    b) to get 3 check marks in each row and 2 check marks in each column?

8. Decrypt the sentence: AA + AA = BBC. The same letters mean identical digits; the different letters mean different numbers.

_____

9. The principal of a school with 484 students collected information about how many students wear glasses.

	Always wear glasses	Sometimes wear glasses	Never wear glasses
Boys	40		161
Girls	36	55	144

    a) Find the number of boys who *sometimes* wear glasses _____

    b) How many of the pupils wear glasses some of the time? _____

    c) How many of the pupils *never* wear glasses? _____

    d) Are there more boys or girls in the school? _____