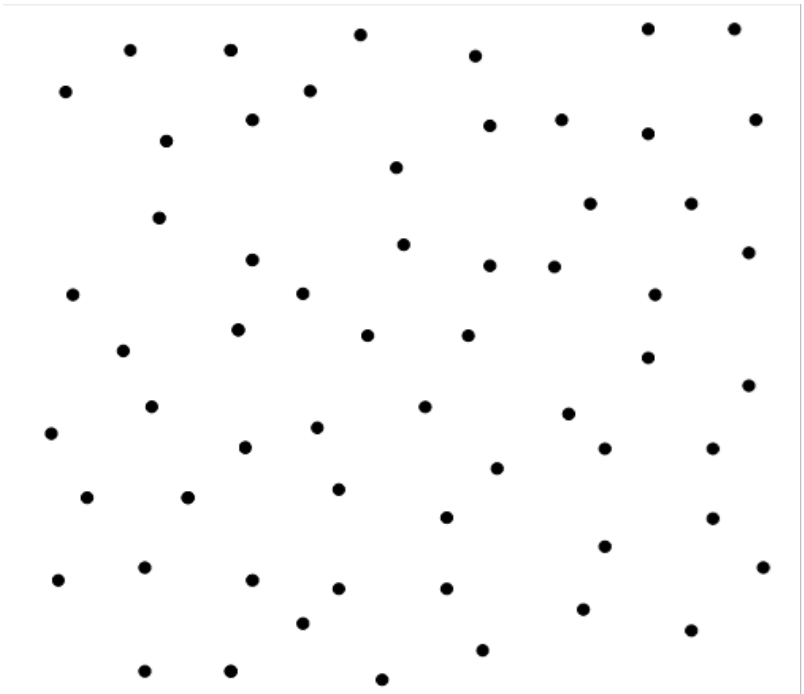
Classwork 17

NEW MATERIAL

1. Count points



# of points:_____

2.

Now try to divide these points into groups of 5 before counting them:

How many groups of 5 did you count?_____

How can we count them now?

By adding: _____

By skip counting_____

Does grouping make it easier to count?_____

Should we always add or skip count?_____

Multiplication is a mathematical operation where a number is added to itself a number of times. When we count point by grouping we multiply them. To express multiplication we write: 5 x _____= _____

3. Calculate:

3 + 3 + 3 + 3 + 3= _____, therefore 3 x 5 = _____

7 + 7 + 7 + 7 = _____, therefore 7 x __ = _____

4 + 4 + 4 + 4 + 4 = _____, therefore 4 x __= _____

8 + 8 + 8 = _____, therefore 8 x ____= _____

4.

4 + 4 + 4 + 4 + 4 + 4 = ____ × _____

4 + 4 + … + 4 = ____ × _____

16 times

a + ***a*** + ***a*** + ***a*** + ***a*** + ***a*** = ____ × _____

a + ***a*** + … + ***a*** = ____ × _____

12 times

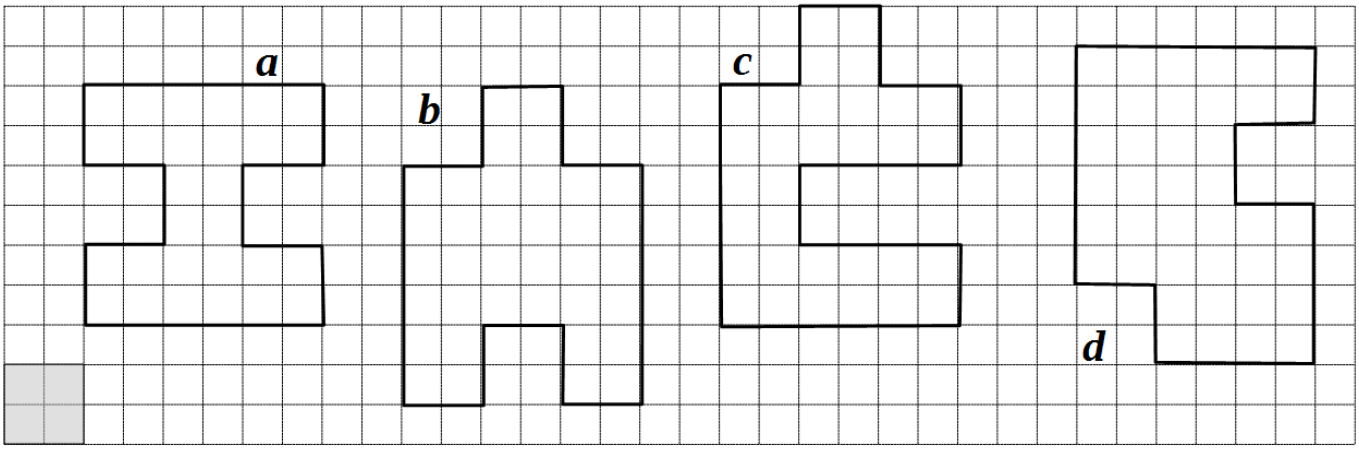
4 + 4 + 4 … + 4 + 4 = ____ × _____

b times

a + ***a*** + … + ***a*** = ____ × _____

z times

5. What would be the best strategy to count cells in each of the shapes below?



Write your answer below:

_____

_____

_____

_____

REVIEW

Remove parenthesis:

6.

a) a + b – (c + d) =

b) (a – b) + (c – d) =

c) a – b - (c – d – e) =

7.

Calculate using the properties of addition:

(37 + 92) + 8 = _____

15 + 38 + 22 + 25 = _____

(34 + 22) + (16 + 8) = _____

8.

Calculate:

10 × 10 = 10 × 10 × 10 = 1 × 1 × 1 =

6.

There are *N* pencils in the red box and *M* pencils in the white box. Masha took ***a*** pencils from the red box. Monty took ***b*** pencils from the white box.

a) N + M _____

b) N – a _____

c) M – b _____

d) a + b _____

Revisiting two – dimensional geometric shapes

Triangle: 3 points (vertices) connected by 3 line segments

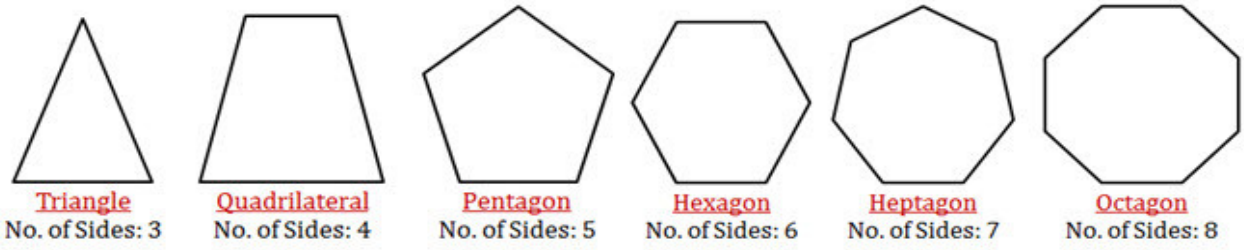
Quadrilateral: 4 vertices, connected by 4 segments

Pentagon (5 vertices), **Hexagon** (6 vertices), and so on.

All of them are special cases of a **polygon**: a figure consisting of some number of points (**vertices**), connected with line segments to form a closed figure.

These line segments are called the **sides** of the polygon.

Different types of polygon:



Polygon (All sides are straight)

NOT a Polygon (One or more sides are curved)

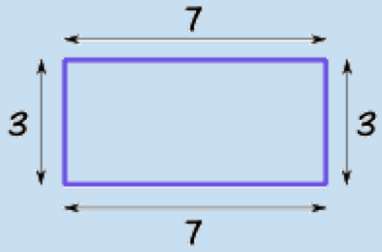
NOT a Polygon (Open, not closed)

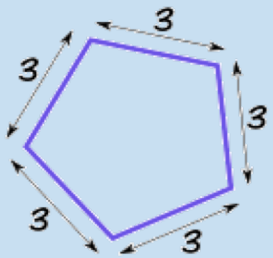
A Perimeter of a polygon is the sum of lengths of its sides.

L = length, **W**= width, and **P** = perimeter

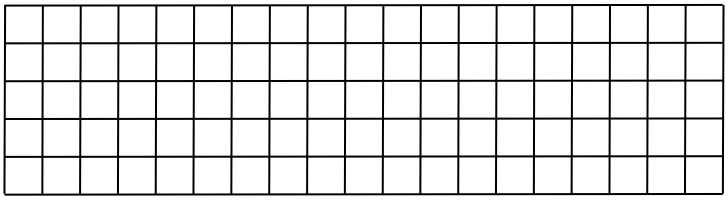
The perimeter of this **rectangle** is **7+3+7+3 = 20**

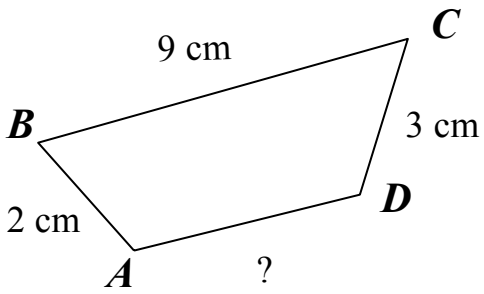
The perimeter of this regular **pentagon is 3+3+3+3+3 = 5×3 = 15**





7. The perimeter of the quadrilateral ***ABCD*** equals 19 cm. What is the length of the side ***AD***?





8. Sallie computes the perimeter of a rectangle by adding the length – l, and width – w, and then doubling this sum.

Eric computes the perimeter of a rectangle by doubling the length – l, doubling the width – w, and then adding the doubled amounts.

a) Write an expression for Sallie's way of calculating the perimeter. Write an expression for Eric's way as well.

b) Use both of the expressions to find the perimeter of a rectangle with length 30 and width 75.

c) Explain why Sallie and Eric always get the same answer, no matter what the length and width of the rectangle are.

Challenge yourself

9. Solve each word problem:

1. A line segment was split into 8 parts. Each part was further split into 5 sections. How many sections was the segment split into?

_____

2. A watermelon can be balanced on a scale by ***x*** apples. An apple can be balanced by ***q*** strawberries. How many strawberries are needed to balance a watermelon?

_____