

WARM-UP

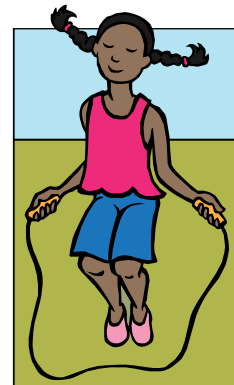
1.

- (a) Total number of students in a school is 656. The number of girls is 86 more than the number of boys. (Take number of boys as x)
- (b) Renee is 26 year younger than her mother. Her mother is 52 year. (Take Renu's age as y)
- (c) Sum of two numbers is 85. The greater number is 13 more than the smaller. (Take smaller number as a)
- (d) Ram is 10 year more than twice the age of Rahim. Ram's age is 56 year (Take Rahim's age as z)
- (e) Perimeter of a rectangle is 20 m. Its length is 2 m greater than is breadth. (Take breadth as y)

REVIEW

2.

- a) There were 10 girls on the school yard. 7 of them had scrunches and 6 of them had ponytails. How is that possible?



- b) There apples and pears on the table. There are 4 less apples that apples and pears together, there are 7 less pears that apples and pears together. How many fruits are there on the table? How many apples? How many Pears?
- c) 5 students in 5th grade class study Spanish only, 8 kids in class study French only. Every student in class studies at least one foreign language. How many people study 2 foreign languages if there 22 kids in that class.

3.

Solve the following equations:

$$3y + 4 = 13$$

$$7x + 16 = 168$$

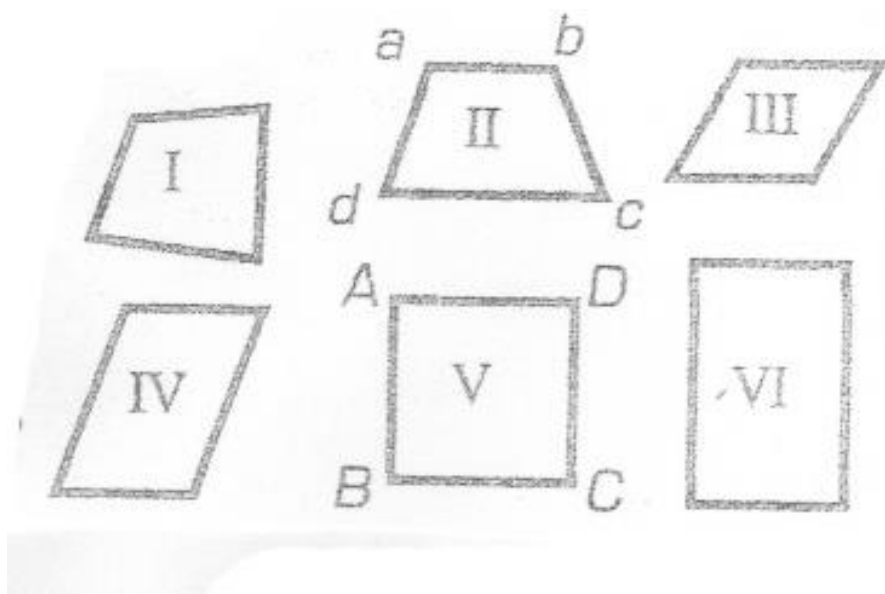
$$12z + 2 = 38$$

$$34x \div 5 + 4 = 6$$

NEW MATERIAL

Polygons with more than 3 angles

Examine the picture below.



What geometric figures do you see? What is the difference between quadrilaterals I and II? How are the sides AB and DC located in respect to each other (quadrilateral II)? They are parallel.

A quadrilateral that has 2 parallel sides is called trapezoid.

What is the difference between the trapezoid II and the quadrilaterals III, IV, V, and VI? How many parallel sides do these quadrilaterals have?

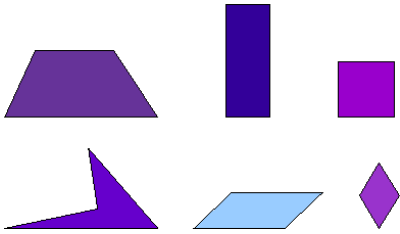
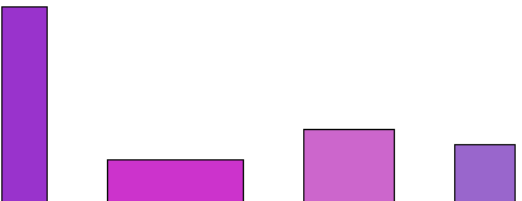
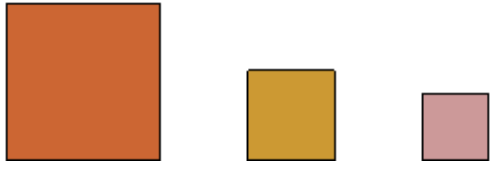
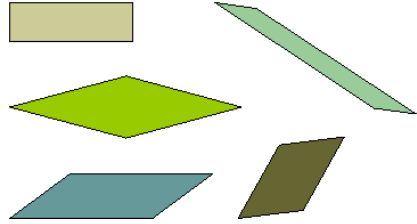
A quadrilateral that is formed by 2 pairs of the parallel sides is called a parallelogram.

Examine the picture below. What is the difference between the quadrilateral IV and the parallelogram III? How are the sides related to each other?

A parallelogram with 4 congruent sides is called rhombus.

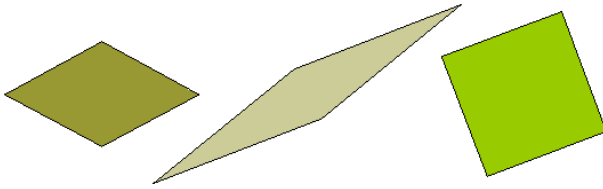
Is there a parallelogram that has only 3 congruent sides? Why, or why not?

Examine the picture below. What is the difference between the quadrilaterals V and VI and the other quadrilaterals on the picture? What kind of angles do they have?

<p>Quadrilateral</p> <p>A four-sided polygon. The sum of the angles of a quadrilateral is 360 degrees.</p> 	<p>Rectangle</p> <p>A four-sided polygon having all right angles. The sum of the angles of a rectangle is 360 degrees.</p> 
<p>Square</p> <p>A four-sided polygon having equal-length sides meeting at right angles. The sum of the angles of a square is 360 degrees.</p> 	<p>Parallelogram</p> <p>A four-sided polygon with two pairs of parallel sides. The sum of the angles of a parallelogram is 360 degrees.</p> 

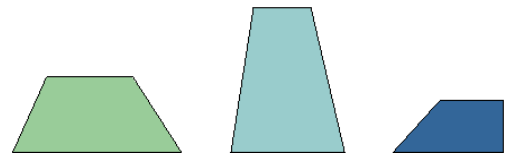
Rhombus

A four-sided polygon having all four sides of equal length. The sum of the angles of a rhombus is 360 degrees



Trapezoid

A four-sided polygon having exactly one pair of parallel sides. The two sides that are parallel are called the bases of the trapezoid. The sum of the angles of a trapezoid is 360 degrees.



4.

Is there a quadrilateral that has only 3 right angles? Why not?

Discuss: If the angles A and B are right angles, then we know that lines AD and BC are _____.

If these lines are parallel then the sum of the angles D and C is _____. Angle C is a right angle, and then B is also a _____.

What is the difference between the quadrilateral IV and V?

5.

Choose the correct statement(s) and circle it:

- Any square is a parallelogram;
- Any parallelogram is a square;
- Any rectangle is a parallelogram;
- Any parallelogram is a rectangle.

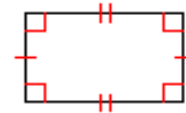
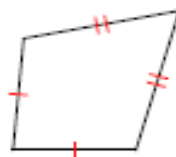
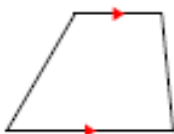
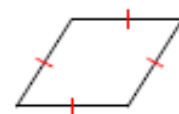
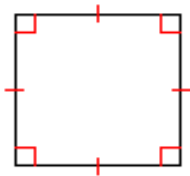
6.

Which shape is described in each case below?

1. four sides; all sides equal; four right angles
2. four sides; opposite sides equal; four right angles
3. four sides; opposite sides parallel; no right angles
4. four sides; exactly two sides parallel
5. four sides; opposite sides equal; no sides perpendicular
6. four sides; opposite sides parallel; adjacent sides perpendicular
7. four sides; all sides equal; no sides perpendicular
8. four sides; no sides parallel; no sides perpendicular

7.

State all possible names for each figure below

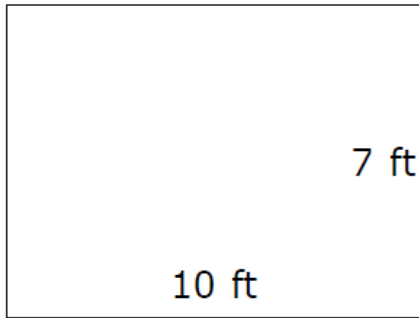


Perimeter

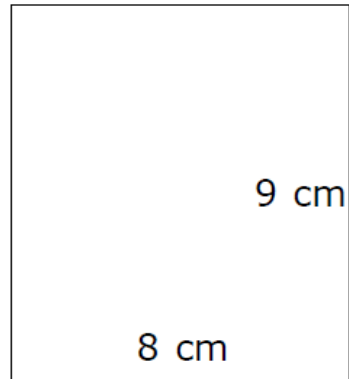
The **perimeter** of a polygon is the sum of the lengths of all its sides.

8.

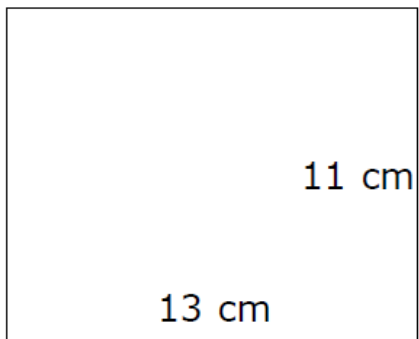
1.



2.



3.



4.

