THE VILLAGE INTERNATIONAL SCHOOL
"We Nurture Dreams"

Worksheet

Grade 7 - Mathematics

Chapter 6 – Properties of triangles

A. Choose the correct option.

1) How many lines are formed when two lines intersect?

a) acute **b)** obtuse **c)** right-angled **d)** equilateral

2) The angles of a triangle are 120^0 , x^0 and $2x^0$. The value of x is:

a) 12^0 **b)** 30^0 **c)** 40^0 **d)** 20^0

3) Two sides of a triangle measure 5 cm and 6 cm. The third side should be less than:

a) 20 cm **b)** 15 cm **c)** 11 cm **d)** 18 cm

4) 3 , 4, _____ forms a Pythagorean triple.

a) 5 **b)** 6 **c)** 7 **d)** 8

5) If one of the angles at an intersection of two lines is 400, which other three angles?

a) isosceles **b)** scalene **c)** equilateral **d)** right-angled

B. Fill in the blanks.

1) In a _____ triangle, all angles are equal.

2) If all sides of a triangle have different lengths, it is a _____ triangle.
In a triangle, all angles can be _____ (acute/obtuse/right) angles.

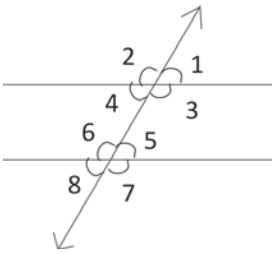
3) In a rectangle, a diagonal divides it into two _____ triangle.

4) With u > v, $u^2 - v^2$, 2uv and _____ form a Pythagorean triple.

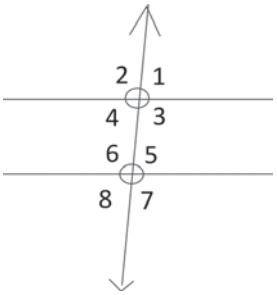
C. Answer the following questions.

1) Both the interior angles on the same side of the transversal are acute angles. What can you say about the lines it intersects? Why?

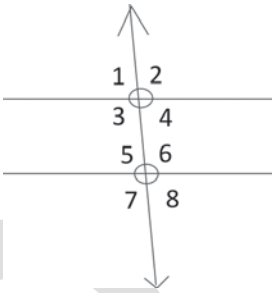
2) In the figure, $\angle 1 = 50°$. Find angles $\angle 2$, $\angle 5$ and $\angle 6$.



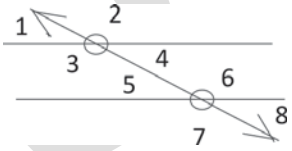
3) In the figure, $\angle 4 = 85°$. Find angle $\angle 8$.



4) In the figure, $\angle 6 = 100°$. Find angle $\angle 1$.



5) In the figure, $\angle 3 = 150°$. Find angle $\angle 6$.



D. Answer the following questions.

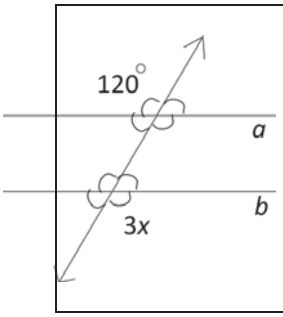
1) In the figure, line segments *a* and *b* are parallel. find the value of *x*.

2) In the figure, determine if line segments *a* and *b* are parallel.

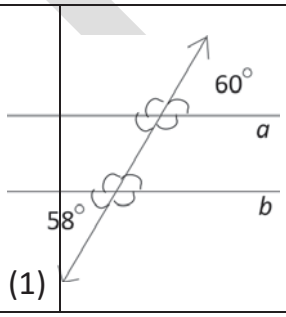
3) In the figure, determine if line segments *m* and *n* are parallel.

4) In the figure, are the lines *p*, *q* and *r* are concurrent? Give reason.

5) In a linear pair, can both angles be acute angles? Explain.



(1)



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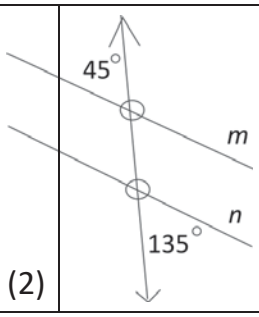

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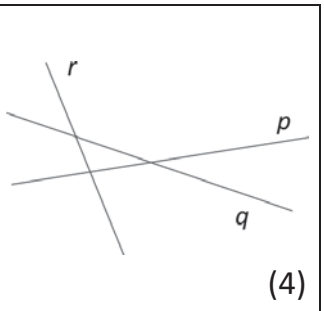

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