A

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First Terminal Evaluation 2018-19

E 703

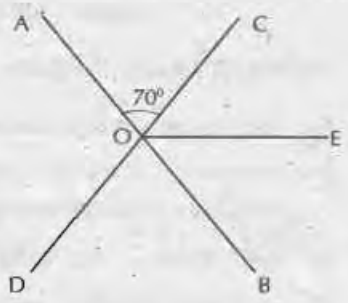
Mathematics

Class : 7 **Time : 2 hrs**

Instructions

1. 15 minutes cool off time is to be allotted for reading and understanding the activities.
2. Answer any **SIX** activities from the given **EIGHT** activities .

Activity 1 - Measure of Angles



In the figure $\angle AOE = 110^0$

A. What is the measure of $\angle BOD$?

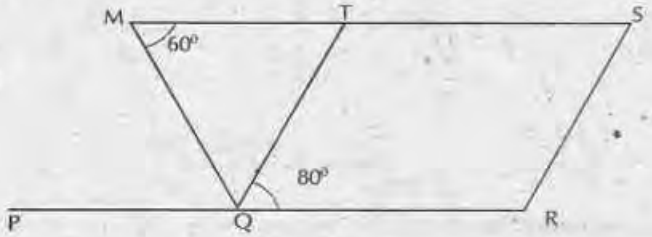
B. What is the measure of $\angle BOE$? Give reasons.

C. Name the angle that forms a linear pair with $\angle AOC$.

D. According to the figure, which among the following is a wrong statement?

1. $\angle AOD$ and $\angle BOC$ are equal.
2. $\angle AOD + \angle BOE = 180^0$
3. $\angle COE$ and $\angle DOB$ are opposite angles.
4. $\angle BOC$ and $\angle BOD$ form a linear pair.

Activity 2 - Parallel Lines



In the figure, the lines PQ and MS are parallel. QT and RS are also parallel.

If $\angle TQR = 80^0$ and $\angle M = 60^0$,

A) Find the measures of the other two angles of triangle MTQ.

B) What is the measure of $\angle PQM$?
Explain the method used.

C) Which among the following based on parallel lines can be used to find the measure of $\angle R$?

1. Corresponding angles are equal.
2. Alternate angles are equal.
3. Co-interior angles are supplementa
4. Co-exterior angles are supplementary.

Activity 3 - Let's Find the General Form.

A) Write three examples for finding the sum of two consecutive even numbers.

B) From each of the sum obtained above, subtract the odd number which comes in between two consecutive even numbers.

C) Write the peculiarity of the answers obtained above.

D) Write the peculiarity in algebraic form.

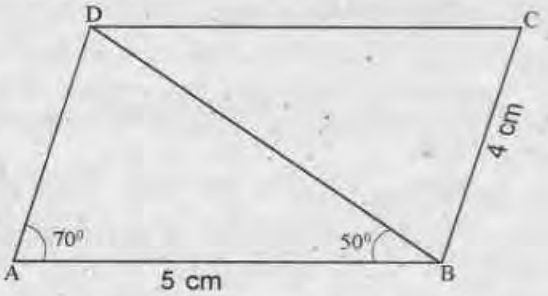
E) If 'x' is a natural number, which among the following is always an odd number?

1) $x+1$ 2) $2x$ 3) $2x-1$ 4) $x-1$

Activity 4 - Let's Draw

In the figure AB, CD are parallel lines. AD and BC are also parallel.

If $\angle A = 70^0$, $\angle ABD = 50^0$



A) What is the measure of $\angle C$?

B) Which among the following is the measure of $\angle DBC$?
1) 70^0 2) 60^0 3) 20^0 4) 110^0

C) Draw the above figure using the same measures.

Activity 5 - Let's Find the Price

The price list of various items in the school store exhibited by Kiran in the Maths Club is as follows.

Item	Price
Notebook	$2^3 \times 3$
Pen	3^2
Bag	3×10^2
Geometry box	10×3^2
Sketch pen	$2^3 \times 5$
Crayons	$2^2 \times 10$

A) Which item has the highest price? Find its price.

B) Which of the above items have the same price?

C) Write the cost of 3 pens in exponential form.

D) If the cost of a file is 48 rupees, which among the following represents this cost?

1) 3×4^2 2) 4×3^2 3) 2×3^4 4) 2×4^3

Activity 6 - Calendar Math

In the calendar of a month, 4 dates in a square are shown in algebraic form.

a	a+1
a+7	a+8

a = ...	.....
.....	.....

a = ...	.....
.....	.....

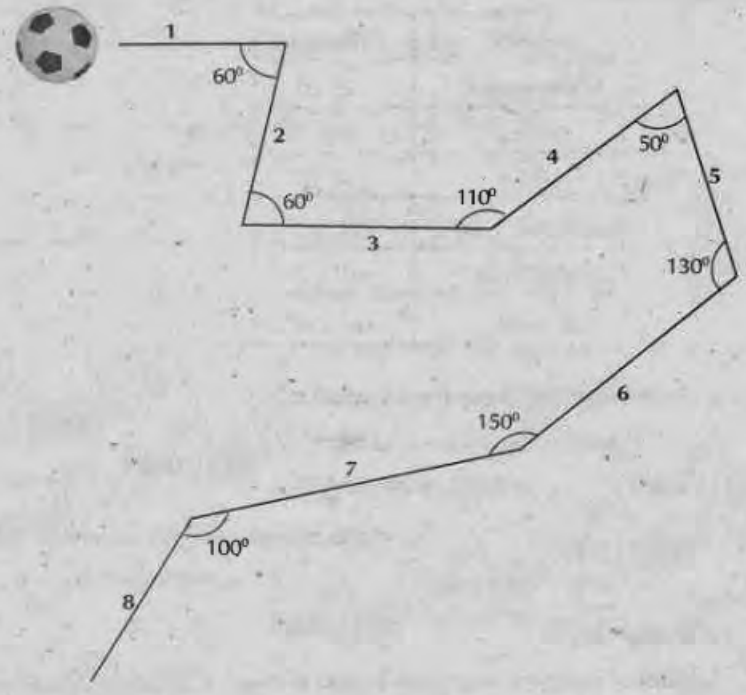
A) Give two different values for 'a' and complete the squares in the calendar.

B) Find the sum of the numbers in the square. Is it a multiple of 4?

C) Using algebra, prove that the sum of numbers in such a square of a calendar is always a multiple of 4.

Activity 7 - Football Competition

Eight lines in the figure shows the path of a football towards the goal post.



A) Which are the pairs of lines where the ball goes parallel?

B) Justify your answer with the properties of parallel lines.

C) Suppose the position of the line 7 changes and if the angle between the lines 6 and 7 becomes 110^0, then how many pairs of parallel lines would have formed?

1) 1 2) 2 3) 3 4) 4

Activity 8 - Different Methods

A) If 5^{10} is written as a natural number, what would be the digit in the ones place?

B) Simplify $\frac{4^3 \times 4^4}{4^2 \times 4^3}$

C) If $3^x = 243$, what is 3^{x-1} ?

D) Which among the following is half of 2^{10} ?

1) 2^5 2) 2^7 3) 2^9 4) 2^{11}