



# MATHS

## BOOKS - HT Olympiad Previous Year Paper

### CLASS 9 SAMPLE PAPER FINAL 4

#### Mathematics

1. The value of  $k$ , if  $(x-1)$  is factor of  $2x^3 + x^2 - 4x + k$ , is -

A.  $-1$

B.  $3$

C.  $1$

D.  $2$

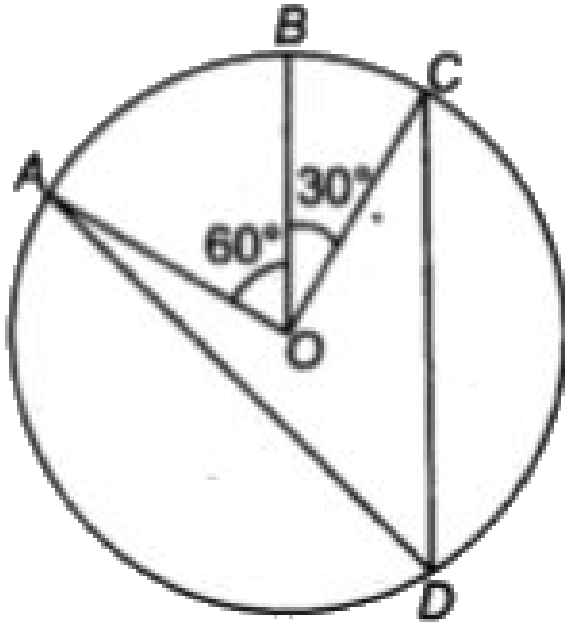
**Answer: C**



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2. In figure A, B and C are three points on a circle with centre O such that  $\angle BOC = 30^\circ$  and  $\angle AOB = 60^\circ$ . If D is a point on the circle

other than the arc ABC, find  $\angle ADC$



- A.  $40^\circ$
- B.  $100^\circ$
- C.  $45^\circ$
- D.  $60^\circ$

**Answer: C**



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3. Eleven bags of wheat flour, each marked 5 kg, actually contained the following weights of flour (in kg) :

4.97 5.05 5.08 5.03 5.00 5.06 5.08 4.98 5.04 5.07

5.00

Find the probability that any of these bags chosen at random contains more than 5 kg of flour.

A.  $7/11$

B.  $4/11$

C.  $10/11$

D.  $5/11$

**Answer: A**



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**4.** If 2 cubes are connected on their bases, the Total Surface Area(TSA) of the new object formed is -

- A. Less than the sum of TSA of two cubes
- B. More than the sum of TSA of two cubes
- C. Equal to the sum of TSA of two cubes
- D. None of these

**Answer: A**



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5. The remainder when  $a^3 + 2a^2 - 3a + 2$  is divided by  $a - 1$  is -

A. 2

B.  $-2$

C. 1

D. 0

**Answer: A**



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6. Which point satisfies the equation

$$3x - 4y = 7?$$

A.  $(-5, 2)$

B.  $(5, 2)$

C.  $(3, -4)$

D.  $(7, 2)$

**Answer: B**



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7. The sum of the probabilities of all possible outcomes of an event is



A. less than 1

B. greater than 1

C. 1

D. can't say anything

**Answer: C**



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**8. Write the coefficients of  $x^3$ :**

$$\frac{4}{7}x^3 + x^2 - 5$$

A.  $\frac{4}{7}$

B.  $-5$

C.  $-4$

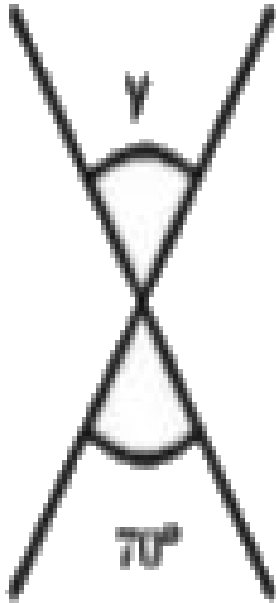
D.  $1$

**Answer: A**



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9. In the given figure, find the value of  $y$ -



A.  $70^\circ$

B.  $100^\circ$

C.  $30^\circ$

D.  $50^\circ$

**Answer: A**



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**10.** The longest chord of a circle divides the circle in\_\_\_\_\_.

A. Two parts

B. Two equal parts

C. Two sectors

D. None of these

**Answer: B**



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