# MATHS

# BOOKS - ASHOK PUBLICATION ASSAM

## Model Question Paper

**Example**

**1.** Write an example of a rational number.

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**2.** If $2x = 0$, find $x$.

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**3.** Give an example of an identity.

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**4.** What is sum of the interior angles of a regular polygon of n sides?

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**5.** What is the value of $\sqrt[3]{64}$

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**6.** $a^m \times a^n \times a^p = ?$

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**7.** Write the formula of compound interest

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**8.** Write the squared number from the following :

36

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**9.** Write the squared number from the following :

49

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**10.** Write the squared number from the following :

101

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**11.** Write the squared number from the following :

65

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**12.** Write the H.C.F of $2 \times 5 \times p \times q$ and $2 \times 2 \times 5 \times q \times r$

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**13.** For what value of $x$, $\frac{2x}{3} = 18$?

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**14.** Using appropriate properties find ,

$$-\frac{4}{6} \times \frac{6}{10} + \frac{10}{4} - \frac{6}{10} \times \frac{2}{12}$$

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**15.** Is $\frac{8}{9}$ the multiplicative inverse of $-1\frac{1}{8}$?

Why or why not?

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**16.** Write two properties of a Rhombus?

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**17.** What can you say about the angle sum of a convex polygon with number of sides 7 ?

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**18.** Define pie diagram.

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**19.** Find the value of $\sqrt{169} \times \sqrt{64} \times \sqrt{16}$

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**20.** State true or false : For any integer $m, m^2 < m^3$. Why?

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**21.** Convert $3:4$ to percentage.

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**22.** Find the product:

$$(4p^2 + 5p + 7) \times 3p$$

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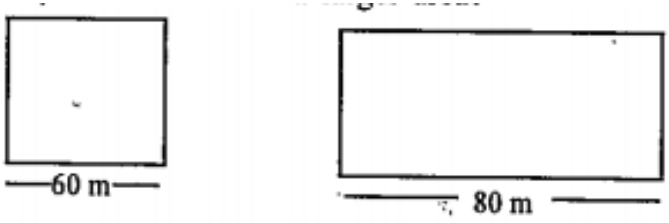
**23.** A square and a rectangular field with measurements a given in the figure have the same perimeter, which field has a larger area?

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**24.** Find the value of.

$$\left(\frac{1}{2}^2 + \left(\frac{1}{3}\right)^2 + \left(\frac{1}{4}\right)^2\right)$$

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**25.** Suppose 2 kg of usgar contains $9 \times 10^6$ crystals. How many sugar crystals are there in 5 kg of sugar?

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**26.** Resolve into factors : $y^2 + 7y + 10$

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**27.** If 21y5 is a multiple of 9, where y is digit, what is the value of y?

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**28.** Solve:

$$\frac{2}{5}(2x - 5) = 5$$

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**29.** The ages of Hari and Harry are in the ratio $5:7$. Four years from now the ratio of their ages will be $3:4$. Find their present ages.

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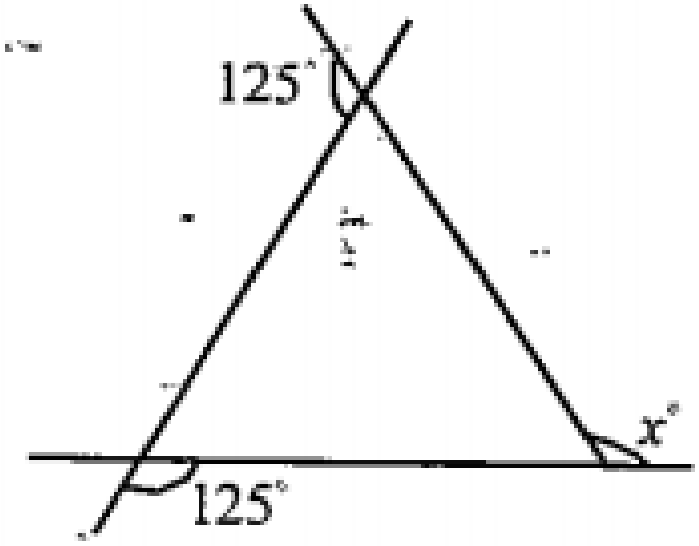
**30.** Find x from the following figure.

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**31.** Can a trapezium have all angles equal? Can it have all sides equal? Explain.

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**32.** Find the smallest square number that is divided by each of the number, 4,9 and 10.

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**33.** In a right triangle ABC, $\angle B = 90^\circ$ If AC = 5 cm, BC = 3 cm, Find AB.

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**34.** In a right triangle ABC, $\angle B = 90^\circ$

If AB = 6 cm, BC = 8 cm, Find AC,

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**35.** In a right triangle ABC, $\angle B = 90^\circ$

If AC = 13 cm, BC = 5 cm, Find AB.

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**36.** Consider the following pattern.

$2^3 - 1^3 = 1 + 2 \times 1 \times 3$

$3^3 - 2^3 = 1 + 3 \times 2 \times 3$

$4^3 - 3^3 = 1 + 4 \times 3 \times 3$

Using the above pattern, find the value of the following.

$7^3 - 6^3$

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**37.** Consider the following pattern.

$2^3 - 1^3 = 1 + 2 \times 1 \times 3$

$3^3 - 2^3 = 1 + 3 \times 2 \times 3$

$4^3 - 3^3 = 1 + 4 \times 3 \times 3$

Using the above pattern, find the value of the following.

$7^3 - 6^3$

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**38.** Construct the quadrilateral DEAR, whose DE = 4 cm, EA = 5 cm, AR = 4.5 cm, $\angle E = 60^\circ$ and $\angle A = 90^\circ$

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**39.** Prove that the sum of the measures of four angles of a quadrilateral is $360^\circ$.

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**40.** Draw a pie chart showing the following information. The table shows the preferred by a group of people.

| Colours | Number of people |
|---|---|
| Blue | 18 |
| Green | 9 |
| Red | 6 |
| Yellow | 3 |
| Total | 36 |

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**41.** Draw a bar-diagram of the following data.

| Children who prefer | School-A | School-B | School-C |
|---|---|---|---|
| Walking | 40 | 55 | 15 |
| Cycling | 45 | 25 | 35 |

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**42.** Is there a number which is equal to its cube but not equal to its square? If yes, find it.

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**43.** If the price of tea increased by 20% by what percent must the consumption reduced to keep the expense the same?

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