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6 Mth Symmetry and practical geometry- MCQs

1. The number of lines of symmetry in a circle is (A) 0 (B) 2 (C) 4 (D) more than 4
2. Which of the following letters does not have the vertical line of symmetry? (A) M (B) H (C) E (D) V
3. Which of the following letters have both horizontal and vertical lines of symmetry? (A) X (B) E (C) M (D) K
4. Which of the following letters does not have any line of symmetry? (A) M (B) S (C) K (D) H
5. Which of the following letters has only one line of symmetry? (A) H (B) X (C) Z (D) T
8. The instrument to measure an angle is a (A) Ruler (B) Protractor (C) Divider (D) Compasses
9. The instrument to draw a circle is (A) Ruler (B) Protractor (C) Divider (D) Compasses
10. Number of set squares in the geometry box is (A) 0 (B) 1 (C) 2 (D) 3
11. The number of lines of symmetry in a ruler is (A) 0 (B) 1 (C) 2 (D) 4
12. The number of lines of symmetry in a divider is (A) 0 (B) 1 (C) 2 (D) 3
13. The number of lines of symmetry in compass is (A) 0 (B) 1 (C) 2 (D) 3
14. The number of lines of symmetry in a protractor is (A) 0 (B) 1 (C) 2 (D) more than 2
15. The instrument in the geometry box having the shape of a triangle is called a (A) Protractor (B) Compasses (C) Divider (D) Set-square

In questions 16 to 22, fill in the blanks to make the statements true.

16. The distance of the image of a point (or an object) from the line of symmetry (mirror) is _____ as that of the point (object) from the line (mirror).
17. The number of lines of symmetry in a picture of Taj Mahal is _____.
18. The number of lines of symmetry in a rectangle and a rhombus are _____ (equal/unequal).
19. The number of lines of symmetry in a rectangle and a square are_____ (equal/unequal).
20. A rectangle is symmetrical about the lines joining the _____ of the opposite sides.
21. If an angle of measure 80° is reflected in a line of symmetry, then the reflection is an _____ of measure _____.
22. The image of a point lying on a line l with respect to the line of symmetry l lies on _____.

In questions 23 - 33, state whether the statements are true (T) or false (F).

23. A right triangle can have at most one line of symmetry.
24. A kite has two lines of symmetry.
24. A parallelogram has no line of symmetry.
25. If an isosceles triangle has more than one line of symmetry, then it need not be an equilateral triangle.
26. If a rectangle has more than two lines of symmetry, then it must be a square.
27. Two perpendiculars can be drawn to a given line from a point not lying on it.
28. With a given centre and a given radius, only one circle can be drawn.
29. Using only the two set-squares of the geometry box, an angle of 40° can be drawn.
30. Using only the two set-squares of the geometry box, an angle of 15° can be drawn.
31. If an isosceles triangle has more than one line of symmetry, then it must be an equilateral triangle.
32. A square and a rectangle have the same number of lines of symmetry..

6 Sc Magnetism

1. North pole of a magnet can be identified by (a) Another magnet having its poles marked as North pole and South pole. (b) Another magnet no matter whether the poles are marked or not. (c) Using an iron bar. (d) Using iron filings. 2. A bar magnet is immersed in a heap of iron filings and pulled out. The amount of iron fillings clinging to the (a) North pole is almost equal to the south pole. (b) North pole is much more than the south pole. (c) North pole is much less than the south pole. (d) Magnet will be same all along its length. **VERY SHORT ANSWER QUESTIONS** 3. Fill in the blanks (i) When a bar magnet is broken; each of the broken part will have .... pole/poles. (ii) In a bar magnet, magnetic attraction is .... near its ends. 4. Paheli and her friends were decorating the class bulletin board. She dropped the box of stainless steel pins by mistake. She tried to collect the pins using a magnet. She could not succeed. What could be the reason for this? 5. How will you test that 'tea dust' is not adulterated with iron powder? 6. A toy car has a bar magnet laid hidden inside its body along its length. Using another magnet how will you find out which pole of the magnet is facing the front of the car? **LONG ANSWER QUESTIONS** 7. Three identical iron bars are kept on a table. Two out of three bars are magnets. In one of the magnet the North-South poles are marked. How will you find out which of the other two bars is a magnet? Identify the poles of this magnet. 8. Describe the steps involved in magnetising an iron strip with the help of a magnet. 9. Suggest an arrangement to store a U shaped magnet. How is this different from storing a pair of bar magnets?

6 Sym The First Empire

Speaker 1- Good morning friends, We welcome you all in our symposium "**The First Empire**". The topic will be covered by …………….., ………….., …………., ……………… and…………..

Alexander's Invasion - In the middle of the third century BCE, India was invaded by foreigners from the north-west. One such foreign invader was the famous Greek conqueror, Alexander of Macedonia I. He was the ruler of Macedonia, who at the young age of 26, left his country with a huge army to conquer the world. After conquering Egypt, Syria, Palestine and Persia, he marched triumphantly through the Hindu Kush Mountains and entered Punjab in India. The two powerful rulers in the Punjab were Ambhi of Taxila and Porus of Paurava. Ambhi welcomed Alexander and struck an alliance with him. On the other hand, Porus refused to accept Alexander's treaty and fought a fierce battle with him. Porus was defeated but Alexander gave back the kingdom to Porus because he was very impressed with him. Alexander then marched ahead but when he reached the River Beas, his soldiers refused to go further. They were tired and Alexander was forced to return home but he died a tragic death in Babylon in 323BCE at the age of 32. When he left India, he appointed governors to look after the territories he had conquered. One of the important effects of Alexander's invasion was the destruction of small kingdoms which paved the way for the founding of a new empire. Now ………… .will discuss the rise of Chandragupta Maurya who was founder of Mauryan empire.

Speaker 2. Chandragupta Maurya, founded the Mauryan empire 2,300 years back when he overthrew the Nanda King with the help of Chanakya, a shrewd advisor and strategic thinker. The first three rulers of the Mauryan Dynasty were Chandragupta Maurya (321-297 BCE), Bindusara (297-273 BCE) and Ashoka (268 - 232 BCE). Chandragupta was succeeded by Bindusara, his son who extended the Mauryan Empire till Mysore. Bindusara was succeeded by his son Ashoka, who is regarded as the greatest ruler of the empire by many historians. He extended the Mauryan Empire till the modern day Afghanistan, with Patliputra as capital. The Mauryan Emperors appointed the family members to control the large empire. Only the capital Patliputra was controlled by the emperor while states like Ujjain and Taxila were governed by royal princes. The three lions or the Lion capital on the Indian Currency notes and coins are from the edicts of the Mauryan Empire which were found at Sarnath. Chanakya has written a book called Arthashastra that comprises his thoughts on politics, economics, foreign affirs, administration, military arts, war and religion. Now …….….…will discuss about war of Chandragupta with Seleucus I Nicator.

Speaker 3. Seleucus I Nicator was a Macedonian general under Alexander. He planned to take over Taxila from Chandragupta. After becoming the Magadha king, Chandragupta fought with Seleucus I and defeated him thus establishing his supremacy in the region. Subsequently, Chandragupta and Seleucus I signed a treaty in 305 BCE. According to this treaty, Seleucus I gave away Punjab, Kabul, Kandahar and Persia to Chandragupta. Chandragupta also married Seleucus' daughter. In return, Chandragupta gave the Greek general 500 elephants as a royal gift. Chandragupta ruled for about 24 years after which he gave up his throne to his son Bindusara and became a Jain monk under the guidance of his guru, Bhadrabahu Swami. He performed sallekhana and starved himself to death in 298 BCE at Shravanabelagola (in present day Karnataka). A small temple marks the cave (called Bhadrabahu Cave) where he died. Now……… will discuss about the reign of Bindusara.

Speaker 4. Bindusara ascended the throne of Magadha after his father. He ruled from 297 to 273 BCE. Bindusara defeated 16 states and extended his empire towards South India. He had diplomatic relations with Syria and Egypt. Bindusara ruled for 25 years. He died in 273 Ujjain. He was a powerful and benevolent ruler. Susima was the eldest son of Bindusara but Ashoka was the most able son. Bindusara's death was followed by a four-year war of succession. Bindusara wanted Susima to succeed him. Ashoka had the support of his father's ministers and after killing his brothers, he ascended the throne of the Mauryan Empire.

Speaker 5. Ashoka was a frightening warrior and an able administrator. During the expansion of his empire, Ashoka led a war against Kalinga on the east coast of India in the present day state of Odisha. Despite his success he was devastated by violence of the war. Consequently, he gave up violence and turned to Buddhism. He spread dharma far and wide by putting up edicts and appointing Dharma Mahamattas. He sent messengers including his son mahendra, daughter Sanghamitra to other countries such as Greece, Egypt, Srilanka. Despite Ashoka's vigorous exertions of faith, he was tolerant of other religions. The empire enjoyed remarkable prosperity during his reign.. He is regarded as one of the most exemplary rulers of the world. Ashoka means 'without sorrow' . We know a lot about him from the rock edicts he put up all over his empire. He converted to Buddhism and propagated it. He undertook pilgrimages to all the places connected with Buddha's life. He built many stupas and viharas. He was closely associated with the Sangha and the Buddhist monks. With this we come to an end of our symposium. Thank you.

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