

Class 7
Sample Paper

AD and BC - Journey to the Greco Roman Era (Public)

1 AD came immediately after 1BC.

- a) The Greco Roman era, when Greece and Rome ruled Egypt, started in the year 330BC and ended in the year 395AD.
- b) Bhaskaracharya was born in the year 1114AD and died in the year 1185AD
- c) The Turks ruled Egypt in the year 1517AD and Queen Nefertis ruled Egypt about 2900 years before the Turks ruled.
- d) The Greek mathematician Archimedes lived between 287 BC and 212 BC and Aristotle lived between 380 BC and 322 BC

Take 1BC as -1 and 1 AD as +1 for solving the following questions which are based on the above Social studies text.



Q1. Work out the total duration of the Greco Roman era staying within the boundaries of AD and BC as given above. Show your work.

Q2. Bhaskaracharya died at the age of 71 years. Check the truth of the above calculation and state your response as YES or NO.

Q3. Read the content given about Queen Nefertis carefully. Spell out your logic and explain your choice of the correct option for the following situation : Queen Nefertis ruled in which year.

- a) 1383 BC
- b) 1383 AD
- c) 1485 BC

Q4. Choose the correct option based on part (d) of the content _____ lived during an earlier period

- a) Archimedes
- b) Aristotle
- c) both a & b lived during the same period.

Measurement

(Scientific)

During term break the students of a school were given a project to be completed using iron rods of different lengths. They were supposed to use the concept of measurements within decimals and prepare some useful models using rods. Three students took up an iron rod and started measuring it. Ravi measured the length of an iron rod and said, it was 19.34 cm long; Kamal said 19.25cm, and Tabish said 19.27cm .(The correct length of the iron rod was 19.33cm.)



Q5. Which is correct in content to the error

- a) Tabish<Kamal<Ravi
- b) Kamal<Tabish<Ravi
- c) Ravi<Tabish<Kamal
- d) Ravi<Kamal<Tabish

Q6. Work out the difference in error made by

- i) Ravi and Kamal
- ii) Kamal and Tabish

Explain your work and discuss which one of the two is lesser

Picnic with Ducks

(Public)



I. Students went to picnic in a zoo. Their teacher gave them the directions to figure out the sound made by a duck as it flies upside down. Decode the information and find the answers.

- a) If $i + 69 = 70$, then $i =$ _____
- b) If $8u = 6u + 8$, then $u =$ _____
- c) If $4a = -5a + 45$, then $a =$ 6
- d) If $4q + 5 = 17$, $q =$ 3
- e) If $-5t - 60 = -70$, $t =$ 2
- f) If $\frac{1}{4}s + 98 = 100$, $s =$ 8
- g) If $\frac{5}{3}p + 9 = 24$, $p =$ 9
- h) If $3c = c + 12$, then $c =$ _____
- i) If $3(k+1) = 24$, then $k =$ _____

Substituting the number for the letter below

1	2/	3	4	5	6	7	8/	4	9
↓		↓							↓
i	/	q					/		p

Q7. Arrive at the value of i by considering (a.) Does it match with the given value (YES/NO).

Q8. Correct the error in part c as the value will make the last sentence change. Choose from the options given.

- a) a=6 is correct
- b) a=5 is correct
- c) a can have any value

Q9. After calculating all the values and substituting them accurately, we see that when a duck flies “it quacks up”. Explain your agreement or disagreement as regards the same.

Know your directions

(Educational)

Four friends are studying the directions and trying to relate them to the angles they have studied in class VI. One of them looking at the picture given below used the knowledge of four directions which he had studied in his geography class and made the following diagram. The rest of the three appreciated his knowledge as it made their work a lot easier.



Q10. The angles between North and West, and South and East are _____ to each other.

- a) Complementary
- b) Supplementary
- c) Both are acute
- d) Both are obtuse

Q11. A person is facing the North East direction. He tells his friend to face a direction such that they both are at right angles to each other. His friend should face which direction?

- a) North
- b) South
- c) North-West
- d) West

Exploring the park

(Personal)

Q12. Jayanti takes the shortest route to her home by walking diagonally across a rectangular park. The park measures 60m x 80m. How much shorter is the route across the park than the route around the edges? Work out the solution.

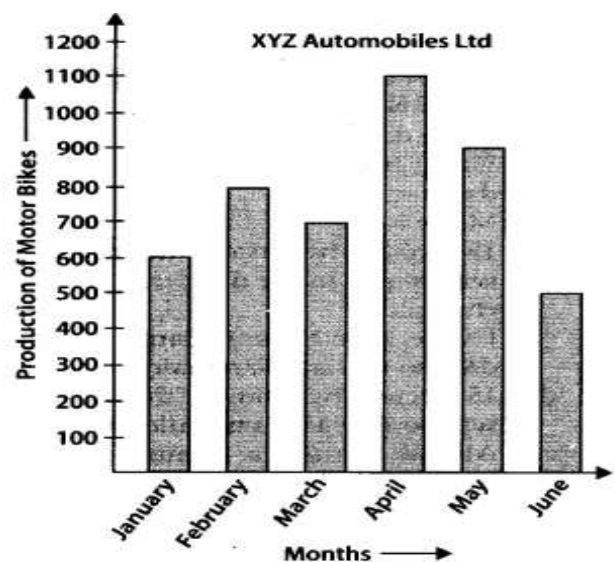


XYZ AUTOMOBILES

(Public)

One day as the teacher went to her class she found the students engrossed in a discussion about the latest motorbike models. The students were talking about the colour, the speed, the design etc. Some had even made some drawings of bikes in their notebooks. The topic for the day was based on statistics so the teacher gave the students a bar graph related to the production of motorbikes.

She asked the students to study the graph carefully and answer the following questions:



Q13. Draw the comparison regarding the production of motorbikes from January to June, clearly stating in which month the production was maximum?

Q14. In the month of June the production was minimum. Do you agree or disagree with the above statement? Explain your reasoning.

Q15. Work out the average production of bikes in 6 months. Show the working.

Answer Key

Ans 1. Total duration of the era = End year- Start year
= (395AD)-(330BC)

Now, 1 AD= +1

1 BC= -1

$$\begin{aligned}\therefore \text{Total Duration} &= +395 - (330(-1)) \\ &= 395 + 330 \\ &= 725 \text{ years}\end{aligned}$$

Ans 2. YES as $1185\text{AD}-1114\text{AD}$
= 1185-1114
= 71

Ans 3: a) i.e. Year in which Turks rules 2900 yrs
=1517 AD - 2900
= 1517(+1) - 2900
=1517-2900
= -1383 i.e.
=1383 BC

Ans 4: b) Aristotle: 380BC-322BC is earlier than 287BC-212BC

Ans 5: C) $(19.25 < 19.27 < 19.34)$

Ans 6 : Error :

Ravi	=	19.34-19.33	= 0.01
Kamal	=	19.25-19.33	= -0.08
Tabish	=	19.27-19.33	= -0.06

Differences: i) $0.01 - (-0.08) = 0.01 + 0.08 = 0.09$

ii) $-0.08 - (-0.06) = -0.08 + 0.06 = -0.02$

Difference between Kamal's and Tabish's error calculations is smaller than Ravi's and Kamal's.

Ans 7: YES; $i+69=70 \Rightarrow i=1$

Ans 8: b) $a=5$ is correct

Ans 9: \therefore Agree

1	2 / 3	4	5	6	7	8 / 4	9
i	t / q	u	a	c	k	s / u	p

Ans 10:- angle b/w N and W = 90°

Angle b/w S and E = 90°

\therefore b is correct ($90+90=180^\circ$)

Ans 11 :- c)North-West

$$\begin{aligned}\text{Ans 12:- } AC^2 &= AB^2 + BC^2 \\ &= (80)^2 + (60)^2 \\ &= 6400 + 3600\end{aligned}$$

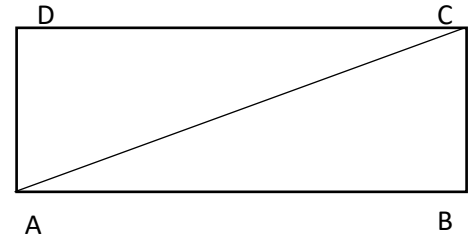
$$AC^2 = 10000$$

$$AC = 100$$

∴ Length of route across the park = 100m

Length of route around the edges = 80 + 60 = 140m

Difference = 140 - 100 = 40m



Ans 13.: Student's view point.

Ans 14: Agree, 500 bikes (minimum)

Ans 15: Average production = $\frac{600+800+700+1100+900+500}{6}$

$$\begin{aligned}&= \frac{4600}{6} \\ &= 766.66 \approx 767\end{aligned}$$