



RAMAGYA SCHOOL ,NOIDA

OLYMPIAD WORKSHEET

CLASS VII

(Concept Based)

1. Subtract :- $4pq-5q^2$ from $5q^2-pq$

- a. $pq-3q^2$ b. $4pq-5q^2$ c. $2pq-0q^2$ d. $5pq+10q^2$

2. . Let x, y, z be three observations. The mean of these observations is

- a. $\frac{x \times y \times z}{3}$ b. $\frac{x+y+z}{3}$ c. $\frac{x-y-z}{3}$ d. $\frac{x \times y + z}{3}$

3. Which of the following are like terms?

- a. $5xyz^2, -3xy^2z$ b. $-5xyz^2, 7xyz^2$ c. $5xyz^2, 5x^2yz$ d. $5xyz^2, x^2y^2z^2$

4. Factorize the following algebraic expression $6xy + 10x^2y$

- a. $2xy(3+5x)$ b. $xy(6+10x)$ c. $3xy(6+10x)$ d. $2xy(8+5x)$

(Application based)

5. Ajoy transfers mangoes from a large box to a few smaller boxes. Mangoes from the larger box filled 2 smaller boxes and yet 13 mangoes remained outside. If the number of mangoes in each small box is b , then how many mangoes were there in the larger box?

- a. $8b + 12$ b. $2b - 13$ c. $2b + 13$ d. $7b + 13$

6. On tossing a coin, the outcome is

- a. only head b. only tail c. neither head nor tail d. either head or tail

7. The median of the data 40, 50, 99, 68, 98, 60, 94 is

- a. 40 b. 60 c. 99 d. 68

8. The value of $3x^2 - 5x + 3$ when $x = 1$ is

- a. 1 b. 0 c. -1 d. 11

(Hots)

9. Sara is standing in a row. If she is n th from the left and m th from the right, how many people are standing in the row?

- a. $n + m - 1$ b. $n + m + 1$ c. $n + m$ d. None of these

10. Khilona earned scores of 97, 73 and 88 respectively in her first three examinations. If she scored 80 in the fourth examination, then her average score will be

- a. increased by 1 b. increased by 1.5 c. decreased by 1 d. decreased by 1.5

11. Look at the table below. Student Enrolment in a school.

Year	K.G.	I
2008-09	185	192
2009-10	193	180
2010-11	191	187

Which of these would be the best scale choice for making the vertical axis of a line graph?

- a. 0-100 b. 100-200 c. 200-300 d. 200-400

12. In a school, only 2 out of 5 students can participate in a quiz. What is the chance that a student picked at random makes it to the competition?

- a. 20% b. 40% c. 50% d. 30%

(Value Based)

13. The length of a rectangular field is 10 meters more than its breadth. If its perimeter is 44 meters, what are the length and the breadth of the field?

- a. 10 meters, 6 meters b. 14 meters, 6 meters c. 16 meters, 6 meters d. 6 meters, 8 meters

14. Which of the following has the same mean, median and mode?

- a. 6, 2, 5, 4, 3, 4, 1 b. 4, 2, 2, 1, 3, 2, 3 c. 2, 3, 7, 3, 8, 3, 2 d. 4, 3, 4, 3, 4, 6, 4

15. The factors of the term $-xy^2$ are

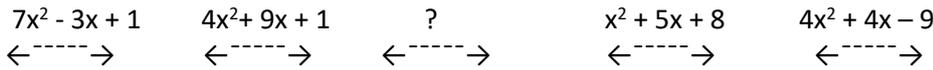
- a. $x \times y \times y$ b. $-1 \times y \times y$ c. $-1 \times x \times y$ d. $-1 \times x \times y \times y$

16. Out of 5 brands of chocolates in a shop, a boy has to purchase the brand which is most liked by children. What measure of central tendency would be most appropriate if the data is provided to him?

- a. Mean b. Mode c. Median d. Any of the three

(Logical Reasoning)

17. If power plant is $23x^2 + 23x - 7$ km from Sulekha's house, how far is chemist from school ?



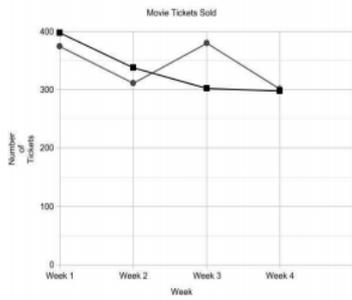
- a. $7x^2 + 8x - 8$ b. $5x^2 + 3x - 8$ c. $7x^2 + 4x - 9$ d. $7x^2 + 8x + 8$

18. In a school, only 2 out of 5 students can participate in a quiz. What is the chance that a student picked at random makes it to the competition?

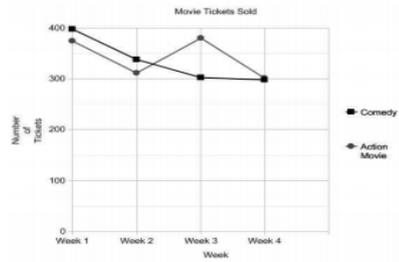
- a. 20% b. 40% c. 50% d. 30%

19. The table at the right shows ticket sales for two different movies at the Allen Park Cinema

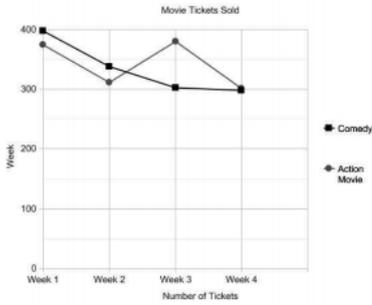
Week	Comedy	Action
Week 1	400	375
Week 2	338	311
Week 3	302	380
Week 4	298	301



a.

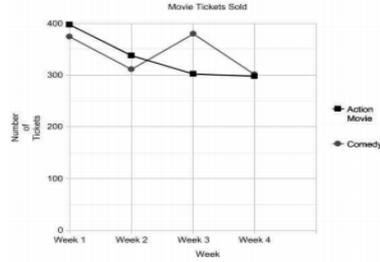


b.



c.

d.



20. The cards bearing letters of the word "MATHEMATICS" are placed in a bag. A card is taken out from the bag without looking into the bag (at random). What is the probability of getting

- (i) M?
- (ii) Any vowel?
- (iii) Any consonant?
- (iv) X?

a. $\frac{2}{11} \frac{5}{11} \frac{1}{11} \frac{3}{11}$

b. $\frac{2}{11} \frac{4}{11} \frac{7}{11} \frac{0}{11}$

c. $\frac{1}{11} \frac{2}{11} \frac{0}{11} \frac{3}{11}$

d. $\frac{2}{11} \frac{7}{11} \frac{0}{11} \frac{4}{11}$