Glossary

English	Русский	O‘zbek
Arithmetic Mean	Среднее арифметическое	O'rtacha qiymat
Area	Площадь	Yuza
Circumference	Окружность	Aylana uzunligi
Common Factor	Общий делитель	Umumiy bo'luvchi
Cross Multiplication	Перекрестное умножение	Kesishgan ko'paytirish
Decimal	Десятичная дробь	O'nlik kasr
Equation	Уравнение	Tenglama
Expression	Выражение	Ifoda
Factorization	Факторизация	Faktorlashtirish
Fraction	Дробь	Kasr
GCD (Greatest Common Divisor)	Наибольший общий делитель (НОД)	EKUB (Eng katta umumiy bo'luvchi)
Inequality	Неравенство	Tengsizlik
Median	Медиана	Median
Multiplication	Умножение	Ko'paytirish
Perimeter	Периметр	Perimetr
Proportion	Пропорция	Proporsiya
Percentage	Процент	Foiz
Ratio	Отношение	Nisbat
Rectangle	Прямоугольник	To'rtburchak
Simplification	Упрощение	Soddalashtirish
Sum	Сумма	Yig‘indi
Solution	Решение	Yechim
Triangle	Треугольник	Uchburchak
Triangular Number	Треугольное число	Uchburchak son
Variable	Переменная	O'zgaruvchi

Grade 7

1. Calculate:

$$21 \times \frac{3}{7} - \left(\frac{1}{5} + \frac{1}{2}\right) \times 1\frac{3}{7} + 2$$

A) 7
B) 8
C) 9
D) 10
E) 11

2. Solve the equation:

$$5x - 2.5 = 2x + 6.5$$

A) 1
B) 2.5
C) 2
D) 3
E) 3.5

3. The function is given by the formula $y = 3x - 5$. For what value of x does the function equal 19?

A) 5
B) 6
C) 7
D) 8
E) 9

4.Expand and simplify the expression:

$$5a(a^2 - 4a) - 8a(a^2 - 6a)$$

A) $3a^3 - 28a^2$
B) $-13a^3 + 68a^2$
C) $-3a^3 + 68a^2$
D) $13a^3 - 28a^2$
E) $-3a^3 + 28a^2$

5. Find the GCD of 54 and 72.

A) 18
B) 1
C) 9
D) 216
E) 27

6. Factor out the common factor $-2b$ from the expression:

$$-10ab - 6b^2$$

What remains inside the parentheses?

A) $-3b - 5a$
B) $5a - 3b$
C) $5a + 3b$
D) $-5a - 3b$
E) $3b - 5a$

7. Find the median of the number series:

30,32,37,40,41,42,45,49,52.

A) 39
B) 40
C) 41
D) 42
E) 43

8. The price of a laptop was reduced by 20%, and now it costs 6 400 000 sum. What was the original price?

A) 7 600 000 sum
B) 8 250 000 sum
C) 8 700 000 sum
D) 7 800 000 sum
E) 8 000 000 sum

9. The ratio of two numbers is 3:5, and their sum is 64. Find the larger number.

A) 30
B) 36
C) 38
D) 40
E) 42

10. The perimeter of a rectangle is 8 cm less than its area. One side is 8 cm. Find the other side

A) 2
B) 4
C) 6
D) 8
E) 10

11. The arithmetic mean of five numbers is 12. Four of the numbers are 10, 14, 9, and 15. Find the fifth number.

A) 12
B) 10
C) 14
D) 15
E) 13

12. Simplify the expression:

$$(3x - 5) + (2x + 7) - (x - 3)$$

and find its value for $x = 4$

A) $5x - 9$, for $x = 4$ the result is 11
B) $4x - 5$, for $x = 4$ the result is 11
C) $4x + 5$, for $x = 4$ the result is 21
D) $5x + 5$, for $x = 4$ the result is 25
E) $4x + 9$, for $x = 4$ the result is 25

13. Solve the equation:

$$5y^2 - 2y$$

A) $0; 2.5$
B) 0
C) $0; -0.4$
D) $0; 0.4$
E) $0; -2.5$

14. Formulate an equation based on the problem:
The distance between two piers is 112 km. The boat traveled this distance downstream 1 hour faster than upstream. Find the boat's own speed if the river current speed is 1 km/h.

A) $\frac{112}{x-1} - \frac{112}{x+1} = 1$
B) $\frac{112}{x+1} - \frac{112}{x-1} = 1$
C) $\frac{112}{x+1} + \frac{112}{x+1} = 1$
D) $\frac{112}{x-1} + \frac{112}{x+1} = 1$
E) $\frac{112}{x-1} + \frac{112}{x-1} = 1$

15. Compute the sum:

$$(-1)^0 + (-1)^1 + (-1)^2 + \cdots + (-1)^{2025}$$

A) -1
B) 0
C) 1
D) -2
E) 2

16. A bartender makes lemonade using 100 grams of lemon juice, 100 grams of sugar, and 400 grams of water.

- 100 grams of lemon juice contain 25 calories.
- 100 grams of sugar contain 386 calories.
- Water contains no calories.

How many calories are there in 200 grams of lemonade?

A) 150
B) 145
C) 130
D) 144
E) 137

17. The circumference of a circle is6π cm. Calculate the area of the circle.

A) 9π cm^2
B) 8π cm^2
C) 10π cm^2
D) 7π cm^2
E) 6π cm^2

18. Find the sum of the natural solutions of the inequality:

$$3x - 9.2 < 2(x - 1.7)$$

A) 15
B) 21
C) 10
D) 35
E) 28

19. On the first day, a tourist walked 20% of the total distance. On the second day, he walked $\frac{3}{7}$ of the total distance. On the third day, he walked the remaining 26 km.
What is the total length of the route?

A) 40 km
B) 70 km
C) 60 km
D) 50 km
E) 30 km

20. Find the sum of the first 30 odd numbers.

A) 200
B) 900
C) 100
D) 600
E) 300

21. The electronic clock currently shows 12:42. What time will it show after 727 minutes?

A) 12:48
B) 01:12
C) 05:30
D) 00:49
E) 12:43

22. In the number 8671, swap two digits so that the resulting number is divisible by 4.

A) 8716
B) 7186
C) 8761
D) 1867
E) 1678

23. When a three-digit number was subtracted from the same number written in reverse order, the result was a number greater than 100 but less than 200. What is the difference?

A) 127
B) 135
C) 141
D) 168
E) 198

24. A rabbit stores its honey in jars.

- Winnie-the-Pooh and Piglet eat one jar in 10 minutes.
- Winnie-the-Pooh and Eeyore eat one jar in 15 minutes.
- Piglet and Eeyore eat one jar in 30 minutes.

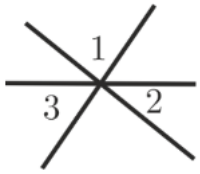
How long will it take for all three together (Winnie-the-Pooh, Piglet, and Eeyore) to eat 6 jars of honey?

A) 25 minutes
B) 30 minutes
C) 60 minutes
D) 72 minutes
E) 48 minutes

25. At a shooting range, a father bought his son 5 bullets and promised to buy 2 more for each successful hit. After 25 shots, the son ran out of bullets. How many times did he hit the target?

A) 12
B) 10
C) 9
D) 11
E) 8

26. Three straight lines intersect at one point. The angles formed are labeled 1, 2, and 3.
It is known that:
$\angle 1 - \angle 2 = \angle 2 - \angle 3 = 10^0$.
Find $\angle 3$



A) $\angle 3 = 60^0$
B) $\angle 3 = 50^0$
C) $\angle 3 = 45^0$
D) $\angle 3 = 30^0$
E) $\angle 3 = 10^0$

27. A village is located between a railway station and a summer cottage settlement, at a distance of 4 km from the station.

- A pedestrian leaves the village towards the settlement at a speed of 75 m/min.
- 30 minutes later, a cyclist leaves the station towards the settlement at a speed of 200 m/min.

How many minutes will it take for the cyclist to catch up with the pedestrian?

A) 45 minutes
B) 60 minutes
C) 30 minutes
D) 50 minutes
E) 55 minutes

28. A grandfather brought 111 cherries to his grandson.

- They ate some cherries together.
- 45% of the remaining cherries were taken by the father for lunch.
- The grandmother found the cherries left after lunch while cleaning.

How many cherries did she find?

A) 21
B) 30
C) 11
D) 32
E) 60

29. A single-round hockey tournament was held with several teams.

- Exactly half of the teams were disqualified and eliminated from the tournament.
- A total of 77 matches were played.
- All disqualified teams played the same number of matches and played all their matches against each other.

How many teams were originally in the tournament?

A) 10
B) 14
C) 7
D) 13
E) 6

30. There are two candles of the same length (24 cm).

- One candle burns down in 4 hours.
- The other burns down in 6 hours.

After how many minutes will one candle be twice as long as the other? The candles are lit at the same time, and they burn at a uniform rate.

A) 180 minutes
B) 100 minutes
C) 90 minutes
D) 184 minutes
E) 120 minutes