



GRADE 7

STUDENTS' WORKSHEETS
MATHEMATICS
(November)

Academic Year
2020 - 2021



COVID-19
ACCELERATED
RESPONSE FOR
EDUCATION, PUNJAB



PUNJAB CURRICULUM AND TEXTBOOK BOARD, LAHORE

GRADE 7

STUDENTS' WORKSHEETS MATHEMATICS (November)



PUNJAB CURRICULUM AND TEXTBOOK BOARD, LAHORE

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Unit-1

WORKSHEET-1

Lesson Plan-1

CONTINUED RATIO

Instruction: Read the following statements carefully and solve in the given space.

Q:1. If $r : s = 1 : 4$
and $s : t = 2 : 3$
Then, find $r : s : t$

Solution:

Q1. The ratio of Saleem's income to Haider's is 2 : 3 and Imran's income to Saleem's is 1 : 5. Find continued ratio among their incomes.

Solution:

Unit-1

WORKSHEET-2

Lesson Plan-2

PROPORTION

Instruction: Read the following questions/statements carefully and solve in the given space.

Q:1. 125 men can construct a road in 120 days. How many men can do the same work in 100 days?

Solution:

Q:2. Find the value of x .

$$35 : 21 = 5 : x$$

Solution:

Unit-1

WORKSHEET-3
Lesson Plan-3

Grade 7

TIME, WORK AND DISTANCE

Instruction: Read the following questions carefully and solve in the given space.

Q1. If a man can weave 450 m cloth in 6 hours, how many meters of cloth can be weaved in 14 hours?

Solution:

Q:2. A man can repair 744 m long track in 24 days. If he repairs 589 m track, then find how many days he will take to repair the remaining track?

Solution:

Unit-1

WORKSHEET-4
Lesson Plan-4

Grade 7

RELATION BETWEEN TIME AND DISTANCE

Instruction: Read the following statements carefully and answer/solve in the given space.

Q1. Fill in the blanks.

(i) Distance is directly proportional to the _____ and speed.

(ii) Distance = _____ × time.

(iii) Speed = $\frac{\boxed{}}{\text{Time}}$

(iv) A man is walking at speed 1 km/hour. In 30 minutes he will walk _____ km.

Q2. Convert the 20m/sec into km/h.

Solution:

Unit-1

WORKSHEET-5
Lesson Plan-5

Grade 7

RELATION BETWEEN TIME AND DISTANCE

Instruction: Read the following questions/statements carefully and answer/solve in the given space.

Q:1. Define speed.

Definition:

Q:2. Write the formula to show relation between time, speed and distance.

Formula:

Q:3. A bus leaves Islamabad at 11:00 A.M and reaches Lahore at 03:00 P.M. If the distance between Lahore and Islamabad is 380 km. Find the speed of the bus.

Solution:

Unit-2

WORKSHEET-6
Lesson Plan-1

Grade 7

TAX

Instruction: Read the following statements carefully and solve in the given space.

Q:1. Hatim bought a bike for Rs. 135,000 and sold at 62% profit. Find the sale price of a bike.

Solution:

Q:2. Find the missing quantity by using the formula.

Markup	Principal	Time Period	Markup Rate
<input type="text"/>	Rs. 500	2 years	12%

Solution:

Unit-2

WORKSHEET-7
Lesson Plan-2

Grade 7

PROFIT AND MARKUP OF PROFIT / MARKUP PER ANNUM

Instruction: Read the following statements carefully and solve in the given space.

Q:1. The price of a toy including 5% general sales tax is Rs. 915. Find the original price of a toy.

Solution:

Q:2. Find the property tax on property of Rs. 650,000 at the rate of 1.8%.

Solution:

Unit-2

WORKSHEET-8

Grade 7

Lesson Plan-3

ZAKAT

Instruction: Read the following questions carefully and solve in the given space.

Q:1. Saba paid Rs. 2,250 as Zakat. What is the worth of her wealth?

Solution:

Q:2. Shama's annual saving is Rs. 2220000, what amount of Zakat is payable on her?

Solution:

Unit-3

WORKSHEET-9

Grade 7

Lesson Plan-1

ALGEBRAIC EXPRESSIONS

Instruction: Read the following statements carefully and answer in the given space.

Q:1. Write constants and variables used in each expression.

$3l^2 - 4x^2$ and $49m + 31l + 14n$

Solution:

Q:2. Add the terms to write an algebraic expression

$9m, 8mn, -10ml, -2$

Solution:

Unit-3

WORKSHEET-10

Lesson Plan-2

POLYNOMIALS

Instruction: Read the following statements carefully and answer in the given space.

Q:1. Identify monomial, binomial and trinomial.

(i) $x^2 + 2xy + y^2$

(ii) $l - m$

(iii) abc

Solution:

Q:2. Identify monomial, binomial and trinomial.

(i) $11x^2y$

(ii) $3a - 2b + c$

(iii) $2x - 3y$

Solution:

Unit-3

WORKSHEET-11

Grade 7

Lesson Plan-3

OPERATIONS WITH POLYNOMIALS (ADDITION)

Instruction: Read the following statements carefully and solve in the given space.

Q:1. Add the polynomials.

$$a^5 + a^3b - 2ab^3 + b^3, \quad 4a^5 + 3a^3b + 2ab^3 + 5b^3$$

Solution:

Q:2. Add the polynomials.

$$3x^4 + 2x^3 + 3x^2 + 4x + 5, \quad 4x^4 - 4x^3 - 5x^2 + 8x - 10$$

Solution:

Unit-3

WORKSHEET-12

Grade 7

Lesson Plan-4

OPERATIONS WITH POLYNOMIALS (SUBTRACTION)

Instruction: Read the following questions/statements carefully and solve in the given space.

Q:1. What be subtracted from $3x^4y^3 + 11 + 4x^6y^4 - 6x^2y$ to get $1 + x^4y^2 - x^2y + x^6y^4$?

Solution:

Q:2. If $A = x - 2y + z$, $B = -2x + y + z$ and $C = x + y - 2z$, then find $A - B - C$.

Solution:

Unit-3

WORKSHEET-13

Grade 7

Lesson Plan-5

MULTIPLICATION OF POLYNOMIAL

Instruction: Read the following statements carefully and solve in the given space.

Q:1. Multiply $\ell^2 mn$ and $\ell m^3 n^6$

Solution:

Q:2. Multiply $2a(2a - 2c)$

Solution:

Q:3. Multiply $3p^2q(p^3 + q^2 - r^2)$

Solution:

Unit-3

WORKSHEET-14

Grade 7

Lesson Plan-6

MULTIPLICATION OF BINOMIAL WITH BINOMIAL / TRINOMIAL

Instruction: Read the following statements carefully and solve in the given space.

Q:1. Multiply $(x + y)(x^2 - xy + y^2)$

Solution:

Q:2. Multiply $(3p - 4q)(3p + 4q)$

Solution:

Unit-3

WORKSHEET-15
Lesson Plan-7

Grade 7

MULTIPLICATION OF BINOMIAL WITH BINOMIAL / TRINOMIAL

Instruction: Read the following statements carefully and solve in the given space.

Q:1. Simplify: $(x + 2)(x - 1)$

Solution:

Q:2. Simplify: $(m + 2)(m^2 - 2m + 3)$

Solution:

Q:3. Simplify: $(x^2 + y^2)(3x + 2y) + xy(x - 3y)$

Solution:

Unit-3

WORKSHEET-16

Lesson Plan-8

ALGEBRAIC IDENTITIES

Instruction: Using identity $(x + a)(x + b) = x^2 + x(a + b) + ab$

Q:1. Fill in the blanks as given below.

• $(x + 6)(x + \square) = x^2 + (\square + 5)x + \square$

• $(x + 2)(x + 4) = x^2 + (\square + \square)x + \square$

• $(x + y)(x + z) = \square + (y + z)\square + \square$

• $(x + 4)(x + 8) = x^2 + (4 + \square)\square + \square$

• $(x + 3)(x + \square) = x^2 + (3 + 4)x + 12$

Unit-3

WORKSHEET-17

Grade 7

Lesson Plan-9

ALGEBRAIC IDENTITIES

Instruction: Read the following statements carefully and solve in the given space.

Q:1. Using $(a + b)^2 = a^2 + 2ab + b^2$, find:

(i) $(4a + 3b)^2$

Solution:

Q:2. $(2x + 3y)^2$

Solution:

Unit-3

WORKSHEET-18

Grade 7

Lesson Plan-10

ALGEBRAIC IDENTITIES

Instruction: Read the following statements carefully and answer/solve in the given space.

Q:1. Using identity: $(a - b)^2 = a^2 - 2ab + b^2$

(i) Prove it when $a = 7$, $b = 3$

Solution:

Q:2. Fill in the boxes.

(i) $(2x - 3y)^2 = (2x)^2 \square 2 \times \square \times (3y) + (\square)^2$

Unit-3

WORKSHEET-19

Lesson Plan-11

ALGEBRAIC IDENTITIES

Instruction: Read the following statements carefully and answer/solve in the given space.

Using $(a + b)(a - b) = a^2 - b^2$

Q:1. Fill in the boxes given below.

(i) $(7a - 9b)(7a + \square) = (\square)^2 - (9b)^2$

(ii) $(6x^2y^2 + 8a^2b^2)(6x^2y^2 - 8a^2b^2) = (\square)^2 - (\square)^2$

Q:2. Simplify: $(7a - 9b)(7a + 9b)$

Solution:



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