

SNBP International & Senior Secondary School, Chikhali, Pune

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Name:

Class: 7 Div:

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Date:

Subject: Math

Ch 8, Ch 10, Ch 11

Q.1) Simplify:

a)
$$\frac{-5}{9}$$
 x $\frac{2}{5}$ x $\frac{-9}{8}$

b)
$$\frac{-14}{15} + (\frac{-3}{5})$$

$$(c)^{\frac{2}{3}} + \frac{5}{4} + \frac{7}{12}$$

d)
$$\frac{-18}{27} \div \frac{-15}{9}$$

e)
$$\frac{-4}{5} \div (-3)$$

f)
$$5\frac{2}{5} - (\frac{3}{5})$$

$$g)\frac{-4}{3} - \frac{6}{7}$$

h)
$$\frac{5}{7}$$
 x $\frac{7}{6}$

i)
$$\frac{-4}{5} + (\frac{-7}{10})$$

Q.2) Give four rational numbers equivalent to:

a)
$$\frac{-2}{7}$$
 b) $\frac{3}{-5}$

b)
$$\frac{3}{-5}$$

Q.3) Draw the number line and represent the following rational numbers

on it: a) $\frac{7}{4}$

a)
$$\frac{7}{6}$$

b)
$$\frac{-5}{8}$$

Q.4) Rewrite the following rational numbers in the simplest form:

a)
$$\frac{19}{57}$$

b)
$$\frac{-36}{99}$$

Q.5) Fill in the boxes with the correct symbol out of >, <, and =.

a)
$$\frac{7}{4}$$
 $\frac{13}{4}$

b)
$$\frac{3}{7}$$
 $\frac{3}{9}$

Q.6) Write four more rational numbers in each of the following patterns:

a)
$$\frac{5}{9}$$
, $\frac{10}{18}$, $\frac{15}{27}$, $\frac{20}{36}$

b)
$$\frac{-4}{6}$$
, $\frac{-8}{12}$, $\frac{-12}{18}$, $\frac{-16}{24}$

Q.7) Classify into monomials, binomials and trinomials.

a)
$$3y - z$$

c)
$$5x + 7y - xy$$

$$d) 4p + 9q$$

e)
$$4x^2 - 2y^2 + xy$$

Q.8) Identify the terms and their factors in the following expressions. Show the terms and factors by tree diagram.

a)
$$6x - 3$$

b)
$$8 + 5x + x^2$$

c)
$$7y - y$$

Q.9) State whether a given pair of terms is of like or unlike terms.

b)
$$-5x$$
, $\frac{4}{7}x$

c)
$$-30x$$
, 3y

Q.10) Simplify these expressions and find their values if x = 4, a = 3, b = -2.

a)
$$4x + 5 - 7x + 3$$

b)
$$2a + 2b - 14 - 5 + a$$

Q.11) Simplify the expression $6(a^2 + ab) - 8 + 4ab$ and find its value when a = 4, b = -3.

Q.12) If a = 5, b = -2, find the value of:

a)
$$6a^2b + 2ab^2 + ab$$

c)
$$\frac{3 a}{4} - 2b + 5$$

d)
$$7a - 3b + 7 - 5 + a$$

Q.13) What should be the value of a if the value of $6x^2 + 3x - a$ equals to 8, when x = 0?

Q.14) Simplify the expressions and find the value if x is equal to 3.

a)
$$x + 3 + 8(x - 3)$$

b)
$$3(x-2) + 7x - 9$$

Q.15) Simplify:

a)
$$(3)^3 \times (-5)^2$$
 b) $(-4)^4$ c) 4×30^2

b)
$$(-4)^4$$

c)
$$4 \times 30^{2}$$

$$d) \frac{30 \times 5^4 \times 12}{5^3 \times 32}$$

Q.16) Using laws of exponents, simplify and write the answer in exponential form.

a)
$$6^3 \times 4^4$$

b)
$$(3^2)^3 \div 3^3$$

c)
$$(5^{15} \div 5^{12}) \times 5^{6}$$

Q.17) Express each of the following as a product of prime factors only in exponential

Q.18) Simplify and express each of the following in exponential form.

a)
$$\frac{2^3 \times 3^4 \times 4}{3^3 \times 30}$$

b)
$$((3^4)^3 \times 3^2) \div 3^7$$

c) (
$$4^{0} + 8^{0}$$
) x 4^{0}

d)
$$(\frac{a^4}{a^3}) \times a^4$$

Q.19) Write the following numbers in the expanded form.

Q.20) Find the number from each of the following expanded forms.

a)
$$(6 \times 10)^4 + (7 \times 10)^3 + (8 \times 10)^2 + (2 \times 10)^1 + (3 \times 10)^0$$

b)
$$(7 \times 10)^5 + (9 \times 10)^1 + (5 \times 10)^0$$

Q.21) Express the following numbers in standard form.

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