



**INDIAN SCHOOL MUSCAT
MIDDLE SECTION
SECOND PERIODIC TEST- 2018-19
ANSWER KEY - MATHEMATICS (SET-A)**



CLASS 8

Q.NO1

SECTION A - FILL IN THE BLANKS

- (a) Reciprocal of $\left(\frac{-3}{2}\right)^{-5}$ is $\left(\frac{-2}{3}\right)^{-5}$ $\left(\frac{-3}{2}\right)^5$
- (b) $(2^{-1} + 5^{-1} + 3^{-1})^0 = 1$
- (c) Standard form of 0.000003576 = 3.576×10^{-6}
- (d) The HCF of $4m^2n$ and $-16m^3n^2$ is $4m^2n$
- (e) Factors of $(12x + 15)$ are 3 and $(4x+5)$

Q.NO2

SECTION B - '1' MARK QUESTIONS

- (a) Evaluate : $\frac{3^5 \times 3^{-12}}{3^{-7}} = \frac{3^{5+(-12)}}{3^{-7}} = \frac{3^{-7}}{3^{-7}} = 1$
- (b) Factorise: $(p^2 - 16) = (p^2 - 4^2) = (p + 4)(p - 4)$
- (c) Write the usual form of $4.129 \times 10^{-6} = 0.000004129$
- (d) Factorise : $5x(x - 4) - 7(x - 4) = (x - 4)(5x - 7)$
- (e) Divide $44xy^2z^3$ by $11yz^2 = 4xyz$

Q.NO

SECTION - C ('2' MARK EACH - TOTAL (10 MARKS))

3 Find the value of x for $\left(\frac{2}{5}\right)^{2x+6} \times \left(\frac{2}{5}\right)^3 = \left(\frac{2}{5}\right)^{x+2} = \left(\frac{2}{5}\right)^{2x+6+3} = \left(\frac{2}{5}\right)^{x+2}$ or $\left(\frac{2}{5}\right)^{2x+9} = \left(\frac{2}{5}\right)^{x+2}$

$2x+9=x+2$ or $2x-x = 2-9$ or $x=-7$

4 Evaluate: $\frac{3^{-5} \times 10^{-5} \times 25}{5^{-7} \times 6^{-5}} = \frac{3^{-5} \times 2^{-5} \times 5^{-5} \times 5^2}{5^{-7} \times 2^{-5} \times 3^{-5}} = \frac{5^{-5+2}}{5^{-7}} = 5^{-3-(-7)} = 5^4 = 625$ $\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2}$

5 Factorise and divide : $8xy(4m^2 - 4mn + n^2) \div 2y(2m - n)$

$= 8xy(2m-n)^2 \div 2y(2m - n) = 4x(2m - n)$

6 Factorise : $p^2 - 15p + 54 = p^2 - 6p - 9p + 54 = p(p - 6) - 9(p - 6) = (p - 6)(p - 9)$

7 Factorise completely: $(2a + 3b)^2 - (2a - 3b)^2$

$= \{(2a + 3b) + (2a - 3b)\} \{(2a + 3b) - (2a - 3b)\}$ $\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2}$

$= \{2a + 3b + 2a - 3b\} \{2a + 3b - 2a + 3b\}$

$= (4a)(6b)$

$= 24ab$