

Subject: **MATHEMATICS**

Date: / 6 / 2016

Name: \_\_\_\_\_

Grade: 08 \_\_\_\_\_

### Revision Sheet

Place the **LETTER** that corresponds with the correct **ANSWER** in the **BOX** provided

- 1) Which of the following are the **factors** of  $x^2 + 10x + 24$  C
- A.  $(x - 4)(x - 6)$       B.  $(x + 4)(x - 6)$       C.  $(x + 4)(x + 6)$
- 2) Which of the following are the **factors** of  $x^2 - 11x + 24$  A
- A.  $(x - 3)(x - 8)$       B.  $(x + 3)(x - 8)$       C.  $(x + 3)(x + 8)$
- 3) Which of the following are the **factors** of  $x^2 + 5x - 24$  A
- A.  $(x - 3)(x + 8)$       B.  $(x + 3)(x - 8)$       C.  $(x + 3)(x + 8)$
- 4) Which of the following are the **factors** of  $x^2 - 5x - 24$  B
- A.  $(x - 3)(x + 8)$       B.  $(x + 3)(x - 8)$       C.  $(x + 3)(x + 8)$
- 5) Which of the following is **GCF** of  $24x^2y$  and  $18xy^3$  C
- A.  $6x^2y$       B.  $6xy^2$       C.  $6xy$
- 6) Which of the following is the correct **prime factorization** of **120** C
- A.  $2^3 \cdot 3^2 \cdot 5$       B.  $2^2 \cdot 3 \cdot 5$       C.  $2^3 \cdot 3 \cdot 5$
- 7) Which of the following are the **factors** of  $x^2 - 81$  C
- A.  $(x + 9)(x + 9)$       B.  $(x - 9)(x - 9)$       C.  $(x + 9)(x - 9)$

8) Which of the following are the **factors** of  $16 - x^2$

B

A.  $(x + 4)(x - 4)$

B.  $(4 + x)(4 - x)$

C.  $(8 + x)(8 - x)$

9) Which of the following are the **factors** of  $25a^2 - 1$

C

A.  $(25a + 1)(25a - 1)$

B.  $(5a + 1)(5a + 1)$

C.  $(5a + 1)(5a - 1)$

10) Which of the following is the correct **prime factorization** of 54

B

A.  $2^3 \cdot 3$

B.  $2 \cdot 3^3$

C.  $2^2 \cdot 3^3$

11) Which of the following is a **factor** of  $100 - 4x^2$

C

A.  $(2x - 10)$

B.  $(10 - 4x)$

C.  $(10 + 2x)$

12) Which of the following is a **factor** of  $x^2 + x - 20$

B

A.  $(x - 5)$

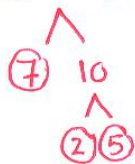
B.  $(x + 5)$

C.  $(x + 4)$

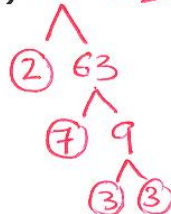
## II) Factor the following

### By prime factorization

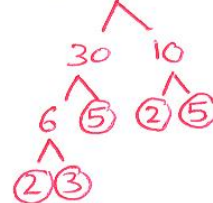
a)  $70 = 2 \cdot 5 \cdot 7$



b)  $126 = 2 \cdot 3^2 \cdot 7$



c)  $300 = 2^2 \cdot 3 \cdot 5^2$



**By GCF**

a)  $6a - 6b = 6(a - b)$

b)  $cd + cf = c(d + f)$

c)  $b^2 - 6b = b(b - 6)$

d)  $10x^2 + 12x = 2x(5x + 6)$

e)  $35a^2 + 20a = 5a(7a + 4)$

f)  $4x - 12x^2 = 4x(1 - 3x)$

**By Guess and check**

1.  $x^2 + 6x + 8 = (x + 2)(x + 4)$

2.  $x^2 - 12x + 20 = \underbrace{(x - 2)}_{\text{sum}} \underbrace{(x - 10)}_{\text{product}}$

3.  $x^2 - 6x + 8 = (x - 2)(x - 4)$

4.  $x^2 + 9x + 20 = (x + 5)(x + 4)$

5.  $x^2 - 8x + 15 = (x - 3)(x - 5)$

6.  $x^2 - 2x + 1 = (x - 1)(x - 1)$

$$7. x^2 + 19x - 42 = \underline{(x+21)(x-2)} \quad 8. x^2 - 3x - 40 = \underline{(x+5)(x-8)}$$

$$9. x^2 + 2x - 24 = \underline{(x+6)(x-4)} \quad 10. x^2 - 7x - 18 = \underline{(x+2)(x-9)}$$

$$11. x^2 + 5x - 36 = \underline{(x-4)(x+9)} \quad 12. x^2 - 4x - 45 = \underline{(x+5)(x-9)}$$

### By Difference of two Squares

$$1. x^2 - 1 = \underline{(x+1)(x-1)}$$

$$2. x^2 - y^2 = \underline{(x-y)(x+y)}$$

$$3. d^2 - 81 = \underline{(d+9)(d-9)}$$

$$4. 16 - a^2 = \underline{(4-a)(4+a)}$$

$$7. 64a^2 - 16b^2 = \underline{(8a-4b)(8a+4b)} \quad 8. 100 - 49a^2 = \underline{(10+7a)(10-7a)}$$