OGUN DIGICLASS

CLASS: SECONDARY SCHOOL

SUBJECT: MATHEMATICS

TOPIC: REVISION

LEARNING OBJECTIVES

Express a number as a product of prime numbers

Simplify a linear equation and solve for the value of the unknown

Expand and simplify an expression with a bracket

Calculate the value of an unknown angles formed by parallel lines

Factors of a number are the numbers that will divide another number perfectly without a remainder

EXAMPLES: List the factors of the following numbers

1. 20 = 1, 2, 4, 5, 10 and 20

2. 12 = 1, 2, 3, 4, 6 and 12

Prime numbers are numbers that are divisible by **ONLY one and the number itself**. It has only two factors

EXAMPLE:

List the prime numbers between 1 and 20

2, 3, 5, 7, 11, 13, 17, 19

Prime factors are the factors of a number that are also prime numbers

Write 45 as a product of prime factors

3	45
3	15
5	5
	1

$45 = 3 \times 3 \times 5$

$3^2 \times 5^1$

TRY THE FOLLOWING:
WRITE THE FOLLOWING NUMBERS AS PRODUCT OF PRIME FACTORS

1. 50
2. 27
3. 72
4. 28
5. 30

LINEAR EQUATIONS

Linear Equations are equations of straight line. The unknown is raised to the power of 1

Solve

$$6x - 3 = 51$$

(Collect like term)

$6x = 51 + 3$

$6x = 54$

(Divide both sides by coefficient of x)

$$\frac{6x}{6} = \frac{54}{6}$$

$X = 9$

Find the value of *x:*

4x + 5 = 40 - 3x

(collect like term)

$4x + 3x = 40 - 5$

$7x = 35$

(Divide both sides by coefficient of x)

$$\frac{7x}{7} = \frac{35}{7}$$

$X = 5$

Try the following by finding the value of *x*

1. $5x - 3 = 4x - 7$

2. $6x + 7 = 4x - 3$

3. $5(x - 7) - 7x = -3(4x - 5)$

EXPANSION OF BRACKET

Expand and simplify

$$3(2x+5)+2(4x-2)$$

(Multiply the number outside with the number inside the bracket)

6x + 15 + 8x – 4 (collect like terms)

6x + 8x +15 – 4

14x + 11

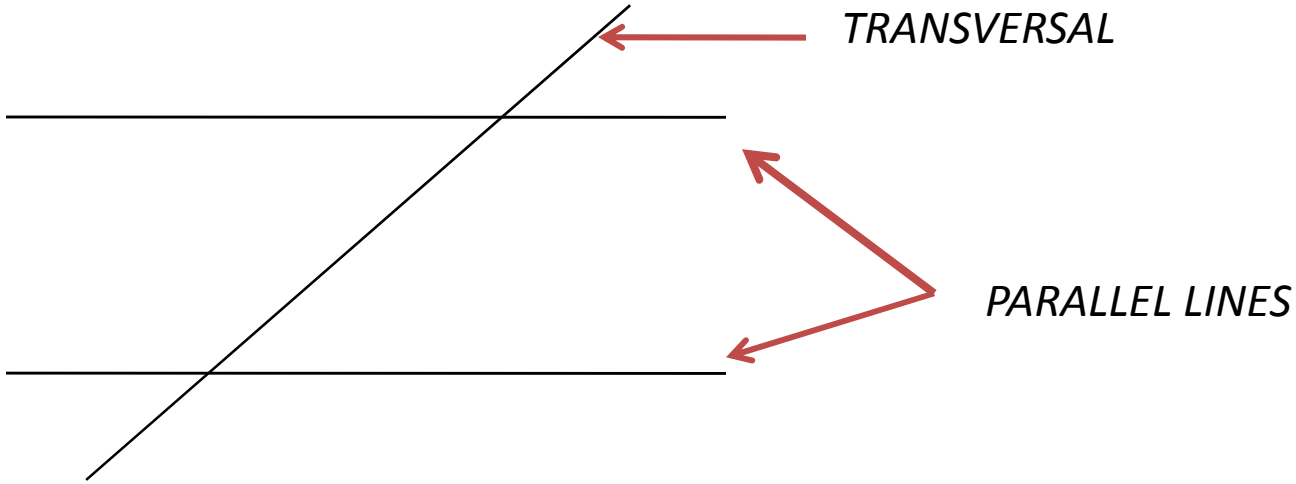
Attempt the following questions

1. $2x(x - y) - 3y(4x + 3y)$
2. $x(x + 3) - 8(x + 3)$
3. $(2x - y + 4)(5x + 3y)$

ANGLES FORMED BY PARALLEL LINES

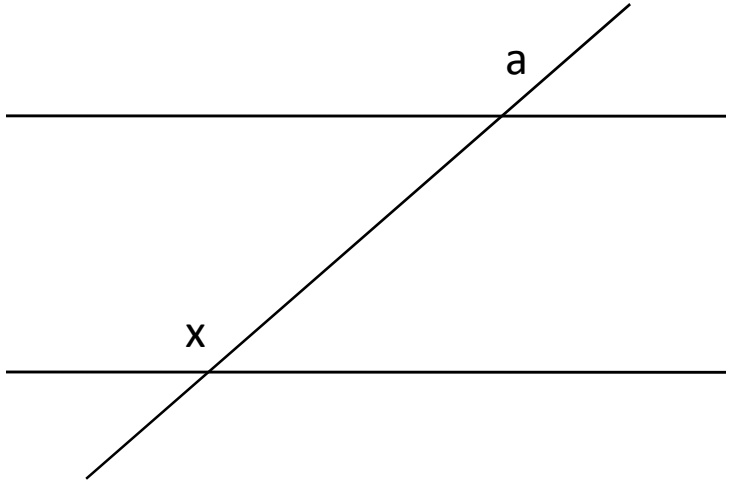
Two lines are parallel *if they* ***do not and can never meet (intersect)*** *when their length is increased.*

Any line cutting across a pair of parallel lines is called a ***TRANSVERSAL***



CORRESPONDING ANGLES

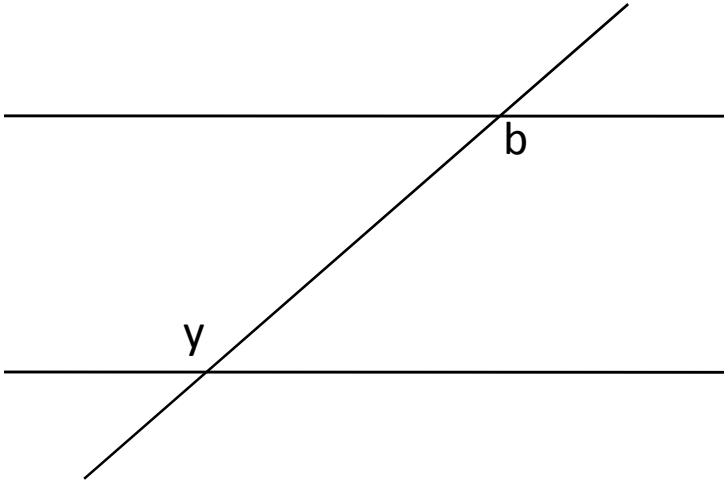
In corresponding angles, one angle is inside while the other is outside and both angles are on the same side



$a = x$

ALTERNATE ANGLES

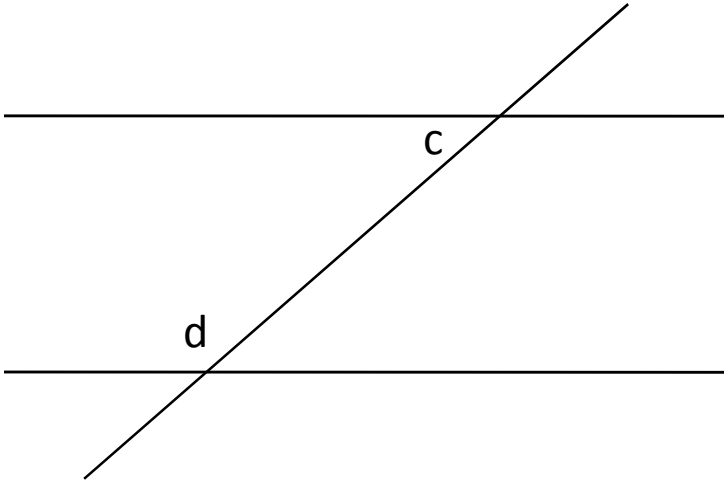
In alternate angles, both angles are within the parallel lines but on the different sides



$b = y$

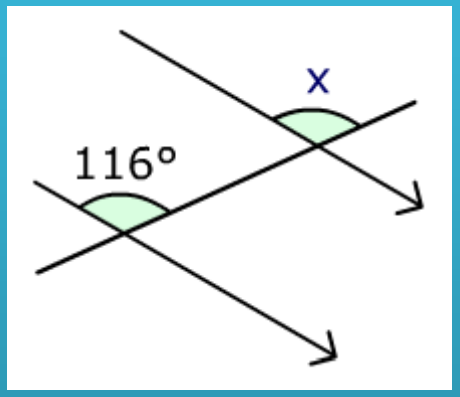
SUM OF INTERIOR OPPOSITE ANGLES

The sum of the interior opposite angles add up to 180^0



$$c + d = 180^0$$

Angle x=116, what is the reason that must go with this? Choose from



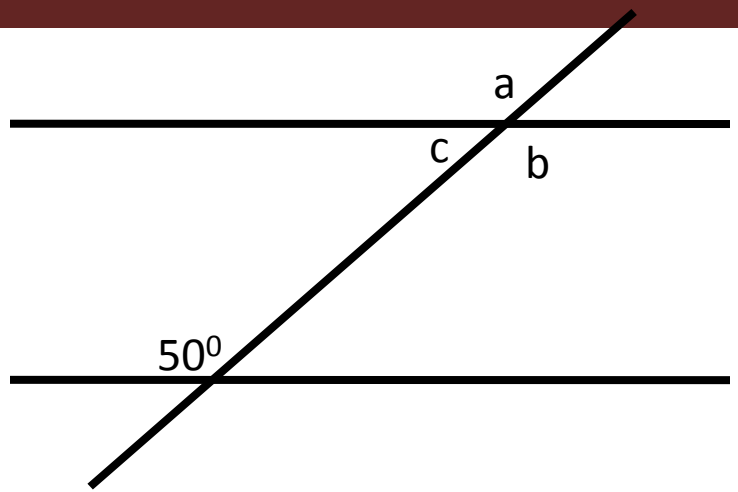
Alternate angles are equal

Corresponding angles are equal

Interior angles add to 180

Corresponding angles are equal

Find the values of angles a, b and c



a = 50^0 (corresponding angles)

b = 50^0 (alternate angles)

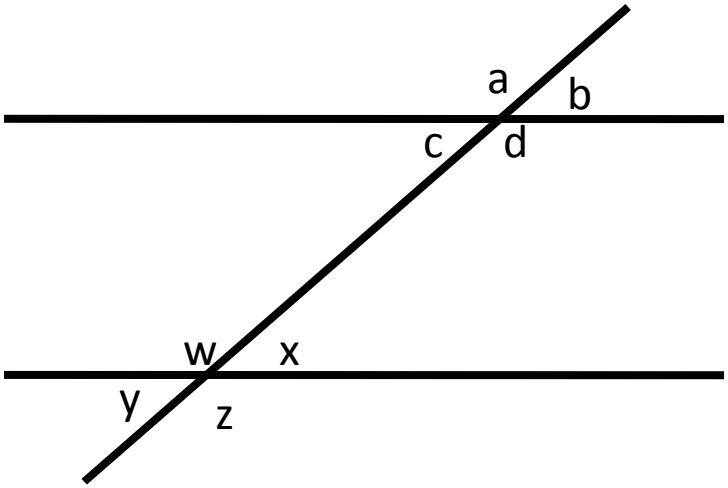
c + 50^0 = 180^0 (sum of interior opposite angles)

Collect like terms

c = $180^0 - 50^0$

c = 130^0

State which angles are corresponding, alternate and sum of interior opposite:



If angle z = 35^0, find the values of all the other angles