LINES AND ANGLES

Line : have infinite length

Parallel lines : never intersects

l
m

P
l
m
Intersecting lines

Line

Sum of all angles on one side of line is 180º

x, $2x$, $4x$, $5x$

$5x + 2x + x + 4x = 180º$

Types of angles

- Acute $(0º < \theta < 90º)$
- Right $(\theta = 90º)$
- Obtuse $(90º < \theta < 180º)$
- Straight $(\theta = 180º)$
- Reflex $(180º < \theta < 180º)$
- Complete $(\theta = 360º)$

Sum of all angle around a point is 360º

$2x$, $3x$, $4x$, $5x$, x

$x + 2x + 3x + 4x + 5x = 360º$

LINES AND ANGLES

Pairs of angles

Complementary angles
Two angles whose Sum is 90º

Supplementary angles
Two angles whose sum is 180º

Vertically opp. angles
$\angle 1 = \angle 3$; $\angle 4 = \angle 2$

Adjacent angles
$\angle 1$ and $\angle 2$ are adjacent angles
opp.arm A
B
common arm
1
2
Common vertex
O
C opp.arm

Linear pair
two adjacent angles whose sum is 180º
150º 30º
P O Q
R

Angles made by transversal

1 2
3 4
5 6
7 8

Corresponding angles
(1, 5) (2, 6) (3, 7) (4, 8)

Co.int. Angles
(4, 6)) (3, 5)

Alternate Int. angles
(3, 6) (4, 5)

Alternat Ext. angle
(1, 8) (2, 7)

If lines are ||el then

Corresponrding angles are equal

Alternate angles are equal

Sum of Co. Int. angles is 180º

x
$x + y$
y