Jender Heart High School, Sec.-33B Chd.
Class: VII
Teacher: Deepti
Subject: Mathematics
Topic: chapter-17: lines and angles

In the last week assignment, we have discussed about the basic Concept of chaper - "lines and angles" now we will try questions of exercise - 17A and 17B

Exercise - 17A

Soln-11 z° and $(z+50)^\circ$ are suplements, then

$$z^\circ + (z+50)^\circ = 180^\circ$$
$$z + z + 50^\circ = 180^\circ$$
$$2z + 50^\circ = 180^\circ$$
$$2z = 180^\circ - 50^\circ$$
$$2z = 130^\circ$$
$$z = \frac{130^\circ}{2} \quad 65^\circ$$
$$\boxed{z = 65^\circ}$$

Soln-13) ratio of two supplementary angles = 7:8

$\Rightarrow$ angles are $7x$ and $8x$

$$7x + 8x = 180^\circ$$
$$15x = 180^\circ$$
$$x = \frac{180^\circ}{15} \quad 12$$
$$\boxed{x = 12^\circ}$$

So angles $7x = 7 \times 12^\circ = 84^\circ$

$8x = 8 \times 12^\circ = 96^\circ$

Soln-15) 80% of angle is the supplement of 140°

$\Rightarrow \frac{4}{5}\cancel{80} \times x = (180^\circ - 140^\circ)$

$\frac{4x}{5} = 40^\circ$

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$$x = \frac{40^{10} \times 5}{4.1} = 50^\circ$$

Soln 18. Let the two angles be x and $x - 30^\circ$

$$x + x - 30^\circ = 180^\circ$$
$$2x - 30^\circ = 180^\circ$$
$$2x = 180^\circ + 30^\circ$$
$$2x = 210^\circ$$
$$\boxed{x = 105^\circ}$$ and $105^\circ - 30^\circ = 75^\circ$

Or.

Let the angle be x and $180^\circ - x$

$$x = 180^\circ - x - 30^\circ$$
$$2x = 150^\circ$$
$$x = 75^\circ$$

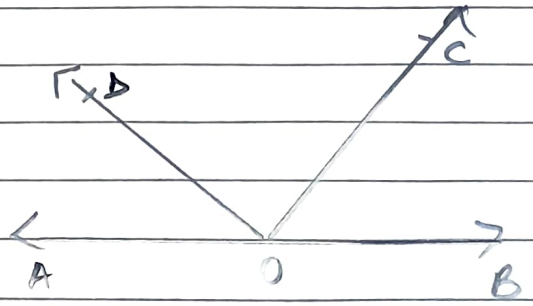
Soln-20 Let the angles be x and $180^\circ - x$

$$\Rightarrow x = \frac{1}{5} \times (180^\circ - x)$$
$$5x = 180^\circ - x$$
$$5x + x = 180^\circ$$
$$6x = 180^\circ$$
$$x = \frac{180^\circ}{6} = 30^\circ$$
$$\boxed{x = 30^\circ}$$

Exercise - 17B

Soln-5 Ratio = 2 : 3 : 4

$\Rightarrow$ angles are = $2x$, $3x$ and $4x$



$$\Rightarrow 2x + 3x + 4x = 180^\circ$$
$$9x = 180^\circ$$

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$$x = \frac{180^{20}}{9} = 20^\circ$$

angles are $2 \times 20^\circ$, $3 \times 20^\circ$, $4 \times 20^\circ$

40°, 60°, 80°

Soln 7 $x + 2x^\circ + 3x^\circ + 4x^\circ = 360^\circ$ (Complete angle)

$10x = 360^\circ$

$x = \frac{360}{10} = 36^\circ$

angles x, $2x$, $3x$, $4x$

36°, $2 \times 36^\circ$, $3 \times 36^\circ$, $4 \times 36^\circ$

36°, 72°, 108°, 144°