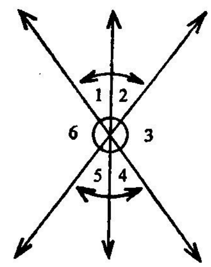
Because $\hat{O}_1 + \boxed{\hat{O}_2} = 180^0$
and $\boxed{\hat{O}_2} + \hat{O}_3 = 180^0$
$\therefore \hat{O}_2$ is common.

(iii) *Thinking.* Allow the child to point out opposite angles in a more complex figure.

(iii)



For example: $\hat{O}_1 + \hat{O}_2 = \hat{O}_4 + \hat{O}_5$.

(iv) *Remembering.* 1. A good example is worked through with the pupils to control their insights into the new.
2. A number of examples are worked through by the pupils themselves.

(iv) *Guided functionalizing*

Thus the lesson aim includes much more than the learning aim in the sense that the teacher for his presentation must anticipate and actualize certain supporting and supplementary principles, forms and modes of learning.

4.2.3 Actualizing foreknowledge and reducing the learning material

a) *Theme:* (Algebra, Grades 11 and 12).
Proof of the remainder theorem.

b) Reduction of the theme:

Illustration

The essence this theme is that When a polynomial in x is divided by $(x - p)$ then the remainder is the same polynomial in p.

Suppose the polynomial $t(x)$ is divided by $(x - p)$. When we now accept that the quotient is going to be $k(x)$ and the remainder R (where R is zero) this means the following:

$t(x) \equiv (x - p \times k(x) + R$

Let $x = p$.

$\therefore t(p) = (p - p) \times k(x) + R.$
$= O \times k(x) + R$
$= O + R.$

Disclosure: The remainder immediately can be calculated by entering the polynomial in p.

c) *Actualizing foreknowledge*
The following foreknowledge as a supportive basis must be actualized beforehand.

Theory	Illustration
(i) *The notation system.*	(i) $t(x) = x^2 - 4$ $t(2) = (2)^2 - 4$ $= 4 - 4$ $= 0.$
(ii) The division as carried out with a polynomial as dividend and another polynomial of a lower value as divisor. Also the quotient must not be negative and there must be a remainder.	(ii) Quotient: $x + 2$ $x - 5 \overline{)\, x^2 - 3x + 5}$ $x^2 - 5x$ $2x + 5$ $2x - 10$ $+ 15$

$\therefore x^2 - 3x + 5 \equiv$
$(x - 5)(x + 2) + 15$
Dividend = divisor x quotient + Remainder.

4.2.4 Stating and formulating the problem and reducing the learning material

a) *Theme* (Trigonometry, Grades 11 and 12).
Compound angles. Proof of the formulas cos $(A \pm B)$ and Sin $(A \pm B)$.

b) *Reduction of the theme*

Theory	Illustration
(i) The essence of this theme can be carried back to the proof of the formula *cos (A + B) = cos A cos B – sin A sin B.* The formulas for cos (A + B) and Sin (A B) all are derived from the above through substitution.	cos (A – B) = Cos A cos B + sin A sin B. (i) Substitute B with –B. $\therefore$ cos [A – (–B)] = cos A cos (–B) + sin A sin (–B) ***cos (A+B) = cos A cos B – sin A sin B.***
(ii) The essence of the proof of cos (A – B) = cos A cos B + sin A sin B is in implementing the interval formula $(AB = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$ between two points $A(x_1; y_1)$ and $B(x_2; y_2)$ as defined in analytic geometry.	(ii) Substitute A by $(90^0 - A)$. $\cos(90^0 - A - B) = \cos(90^0 - A) \cos B + \sin(90^0 - A) \sin B.$ $\cos\ [90^0 - \overline{A + B}] = \sin A \cos B + \cos A \sin B$ sin (A + B) = sin A cos B + cos A sin B. (iii) Substitue B by –B in the formula sin (A + B)