AngleFromSlope   Calculate angle given slope

#include <ToolUtils.h>   **Toolbox Utilities**

short   **AngleFromSlope(***theSlope* **)**;
Fixed   *theSlope* ;   ratio of dh/dv
                 returns   angle in degrees (-180 to 180)

Given the slope of a line (the dh/dv or the horizontal change divided by the vertical change between any two points on the line) **AngleFromSlope** calculates the angle of that line. The calculation is approximate to the nearest degree.

> *theSlope* a 4-byte Fixed value; the dh/dv ratio of points on a line.

> **Returns**: a signed short integer representing the angle most closely matching the specified slope ratio. Positive values are clockwise from vertical and negative values are counterclockwise.

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Notes: The returned angle is expressed in circular degrees, going clockwise with 12 o'clock at 0°, 3 o'clock at 90°, etc. Negative values are counterclockwise from straight up; e.g., 9 o'clock is -90°.

The following example calculates the slope of a line represented by two endpoints and uses **AngleFromSlope** to derive the angle of the line.

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│   **Example**   │
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```
#include <ToolUtils.h>
#define INT2FIX(i) ((long) i << 16 )/* short to Fixed conversion macro */

Fixed       theSlope;
Point       startPt, endPt;
short       theAngle, dh, dv;

dh = startPt.h - endPt.h;                    /* calculate the deltas */
dv = startPt.v - endPt.v;

theSlope = FixRatio( INT2FIX(dh), INT2FIX(dv) );      /* slope=dh/dv */
theAngle = AngleFromSlope( theSlope );
```