A. In line 34, register `%edx` is copied to register `%eax` as the return value. From this, we can infer that `%edx` holds `result`.

B. The original C code for the function is as follows:

```c
/* Enumerated type creates set of constants numbered 0 and upward */
typedef enum {MODE_A, MODE_B, MODE_C, MODE_D, MODE_E} mode_t;

int switch3(int *p1, int *p2, mode_t action)
{
    int result = 0;
    switch(action) {
    case MODE_A:
            result = *p1;
            *p1 = *p2;
            break;
    case MODE_B:
            *p2 += *p1;
            result = *p2;
            break;
    case MODE_C:
            *p2 = 15;
            result = *p1;
            break;
    case MODE_D:
            *p2 = *p1;
    /* Fall Through */
    case MODE_E:
            result = 17;
            break;
    default:
            result = -1;
    }
    return result;
}
```