

## 3.1

LINE A : PARENT: value = 5

程式碼截圖：



```
GNU nano 7.2 figure3_30.c
#include <sys/types.h>
#include <stdio.h>
#include <unistd.h>
#include <sys/wait.h>

int value = 5;

int main ()
{
    pid_t pid;

    pid= fork();

    if (pid == 0) { /* child process */
        value += 15;
        return 0;
    }
    else if (pid > 0) { /* parent process */
        wait(NULL);
        printf("PARENT: value = %d\n", value); /* LINE A */
        return 0;
    }
}
```

## 3.2

8

## 3.13

A : child: pid = 2603

B : child: pid1 = 2603

C : parent: pid = 2603

D : parent: pid1 = 2600

程式碼截圖：

```
Oct 19 08:41
s111212024@111212024-VirtualBox: ~
GNU nano 7.2 figure3_34.c
#include <sys/types.h>
#include <stdio.h>
#include <unistd.h>
#include <sys/wait.h>

int main()
{
    pid_t pid, pid1;

    /* fork a child process */
    pid = fork();

    if (pid < 0) {
        fprintf(stderr, "Fork Fail");
        return 1;
    }
    else if (pid == 0) {
        pid1 = getpid();
        printf("child: pid = %d\n", pid1);
        printf("child: pid1 = %d\n", pid1);
    }
    else {
        pid = getpid();
        printf("parent: pid = %d\n", pid);
        printf("parent: pid1 = %d\n", pid1);
        wait(NULL);
    }
}
```

[ Read 30 lines ]

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輸出結果：

```
Oct 19 08:40
s111212024@111212024-VirtualBox: ~
s111212024@111212024-VirtualBox:~$ gcc figure3_30.c -o test1
s111212024@111212024-VirtualBox:~$ ./test1
PARENT: value = 5
s111212024@111212024-VirtualBox:~$ gcc figure3_34.c -o test3
s111212024@111212024-VirtualBox:~$ ./test3
parent: pid = 12408
parent: pid1 = 32764
child: pid = 12409
child: pid1 = 12409
s111212024@111212024-VirtualBox:~$
```