

Figure 4 contains a subroutine that returns a value.

Figure 4

```

SUBROUTINE Divide(a, b)
  c ← a
  FOR i ← 1 TO 3
    c ← c / b
  END FOR
  RETURN c
ENDSUBROUTINE
    
```

a) Complete the trace table below when the subroutine call `Divide(27, 3)` is made (you may not need all the rows in the table):

[3 marks]

a	b	c

b) A programmer mistakenly tries to shorten the subroutine in Figure 4 by replacing the lines:

```

c ← a
FOR i ← 1 TO 3
  c ← c / b
END FOR
    
```

With the line:

```
c ← a / b * 3
```

Explain why this change is a mistake

[2 marks]

.....

.....

.....

c) What value is returned by the subroutine call `Times(p, 0)` where p is any positive integer?

[1 mark]

.....