

Firework Loops Predict ANSWERS

Match the outlines below to the correct sections of code

1. Set up the rocket ready to go. **F (1 mark)**
2. Explode the rocket. **H (1 mark)**
3. Fly the rocket up into the sky. **G (1 mark)**
4. Run all the sections of code in order over and over again. **E (1 mark)**

E

```

when clicked
  forever
    A
    B
    C
  
```

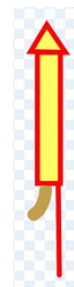
F

```

define A
  switch costume to fuse
  clear graphic effects
  go to x: pick random 150 to -150 y: -140
  point in direction 0
  wait until color brown is touching yellow ?
  
```

```

1 fuse 103 x 18
2 flight1 103 x 18
3 flight2 103 x 18
4 explode 2 x 2
  
```



G

```

define B
  change color effect by 15
  repeat 25
    switch costume to flight1
    move 4 steps
    switch costume to flight2
    move 4 steps
  
```

H

```

define C
  switch costume to explode
  change pen color by 10
  pen down
  repeat 20
    move 50 steps
    turn 140 degrees
  pen up
  wait 2 seconds
  erase all
  
```

5, Draw the flow of control for code section E. Remember to put a dot on the line to show code blocks A, B & C

If you missed the top dot you can still have the mark (1 mark)



6, There are three loops on this page. We know when a definite loop is going to end. We don't know when an indefinite loop will end. Write a DEF next to any definite loops and an IN next to any indefinite loops.

- 6A, forever **IN (1 mark)**
- 6B, repeat 25 **DEF (1 mark)**
- 6C, repeat 20 **DEF (1 mark)**

Firework Loops Run & Investigate **ANSWERS**

1, Which line of code makes the rocket wait until the yellow flame touches the brown fuse? **Wait until colour brown Is touching colour yellow (1 mark)**

2, Which block of code points the rocket upwards? **Point In direction 0 (1 mark)**

3, How many times is turn right 140 degrees run? 20 times (1 mark)

4, How many times is **move-4-steps** run when the rocket is in flight?

(HINT How many move blocks are there?) **40 (1 mark)**

NOTE There are 2 move-4-steps blocks, so $2 \times 20 = 40$

5, How many times are blocks A, B and C run?

Once,

20 times,

We don't know how many times (1 mark)

Firework Loops Modify **ANSWERS**

1, Change the code to make the rocket fly slower. What did you change?

Any answer that reduces the number of steps (1 mark)

2, Change the code to make the rocket fly higher. What did you change?

Any answer that either increases the number of steps from 4 or increases the number of repeats from 20 or both (1 mark)

3, Change the code to produce a larger explosion. What did you change?

Any answer that includes increasing the 50 in move 50 steps (1 mark)