Mata Kuliah	**:**	**Dasar Pemrograman**
Bobot Sks	**:**	**2**
Dosen Pengembang	**:**	**Riad Sahara, S.SI, M.T** **Syahid Abdullah, S.Si, M.Kom**
Tutor	**:**	**Syahid Abdullah, S.Si, M.Kom**
Capaian Pembelajaran Mata Kuliah	**:**	**1. Mahasiswa mampu memahami Konsep Logika dan Pemrograman** **2. Mahasiswa mampu memahami Konsep Algoritma dan Pemrograman** **3. Mahasiswa mampu memahami Konsep Flowchart dan simbol-simbolnya** **4. Mahasiswa mampu memahami Konsep Pseudocode dan simbol-simbolnya** **5. Mahasiswa mampu memahami Konsep Variabel, Konstanta dan Tipe Data** **6. Mahasiswa mampu memahami Konsep, Jenis operasi & operator yang harus digunakan**
Kompetentsi Akhir di Setiap Tahap (Sub-Cpmk)		**1. Mahasiswa menyelesaikan berbagai kasus yang berkaitan dengan perkuliahan pertemuan 1-6**
Minggu Perkuliahan Online Ke-		**7**

JUDUL TOPIK – Review Materi 1-6

Review

Quiz 1

1. Tulis algoritma penjumlahan 5 bilangan. Telusuri algoritma jika diberikan bilangan 1, 3, 5, 7, dan 9.

2. Tulis algoritma untuk menghitung rata-rata dari 5 bilangan. Telusuri algoritma jika diberikan bilangan 1, 3, 5, 7, dan 9.
3. Tulis algoritma untuk mengalikan 3 bilangan. Telusuri algoritma jika diberikan bilangan 2, 9, dan 6.

Jawaban No. 1

```
NAME : SUM5
GIVENS    : X1,X2,X3,X4,X5
RESULTS   : Total
DEFINITION: Total := SUM5(X1,X2,X3,X4,X5)
------------------------
METHOD:
     DECLARE
     num X1
     num X2
     num X3
     num X4
     num X5
     num Total
     GET X1
     GET X2
     GET X3
     GET X4
     GET X5
     LET Total = X1 + X2 + X3 + X4 + X5
     GIVE Total
```

- Penelusuran Algoritma menggunakan bilangan 1, 3, 5, 7, 9

	METHOD	Line	X1	X2	X3	X4	X5	Total
(1)	GET X1	1	1					
(2)	GET X2	2		3				
(3)	GET X3	3			5			
(4)	GET X4	4				7		
(5)	GET X5	5					9	
(6)	LET Total = X1 + X2 + X3 + X4 + X5	6						25
(7)	GIVE Total	7 output 25						

Jawaban No. 2

```
NAME : AVG5
GIVENS    : X1,X2,X3,X4,X5
RESULTS   : AVG
DEFINITION: AVG := AVG5(X1,X2,X3,X4,X5)
-------------------------
METHOD:
DECLARE
     num X1
     num X2
     num X3
     num X4
     num X5
     num AVG
     GET X1
     GET X2
     GET X3
     GET X4
     GET X5
     LET AVG = (X1 + X2 + X3 + X4 + X5) / 5
     GIVE AVG
```

- Penelusuran Algoritma menggunakan bilangan 1, 3, 5, 7, 9

	METHOD	Line	X1	X2	X3	X4	X5	AVG
(1)	GET X1	1	1					
(2)	GET X2	2		3				
(3)	GET X3	3			5			
(4)	GET X4	4				7		
(5)	GET X5	5					9	
(6)	LET AVG = (X1+X2+X3+X4 +X5)/5	6						5
(7)	GIVE AVG	7 output 5						

Jawaban No. 3

```
NAME : PROD3
GIVENS     : X, Y, Z
RESULTS    : PRODUCT
DEFINITION: PRODUCT := PROD3(X, Y, Z)
-------------------------
METHOD:
     DECLARE
     num X
     num Y
     num Z
     num PRODUCT
     GET X
     GET Y
     GET Z
     LET PRODUCT = X * Y * Z
     GIVE PRODUCT
```

- Penelusuran Algoritma menggunakan bilangan 2, 9, 6

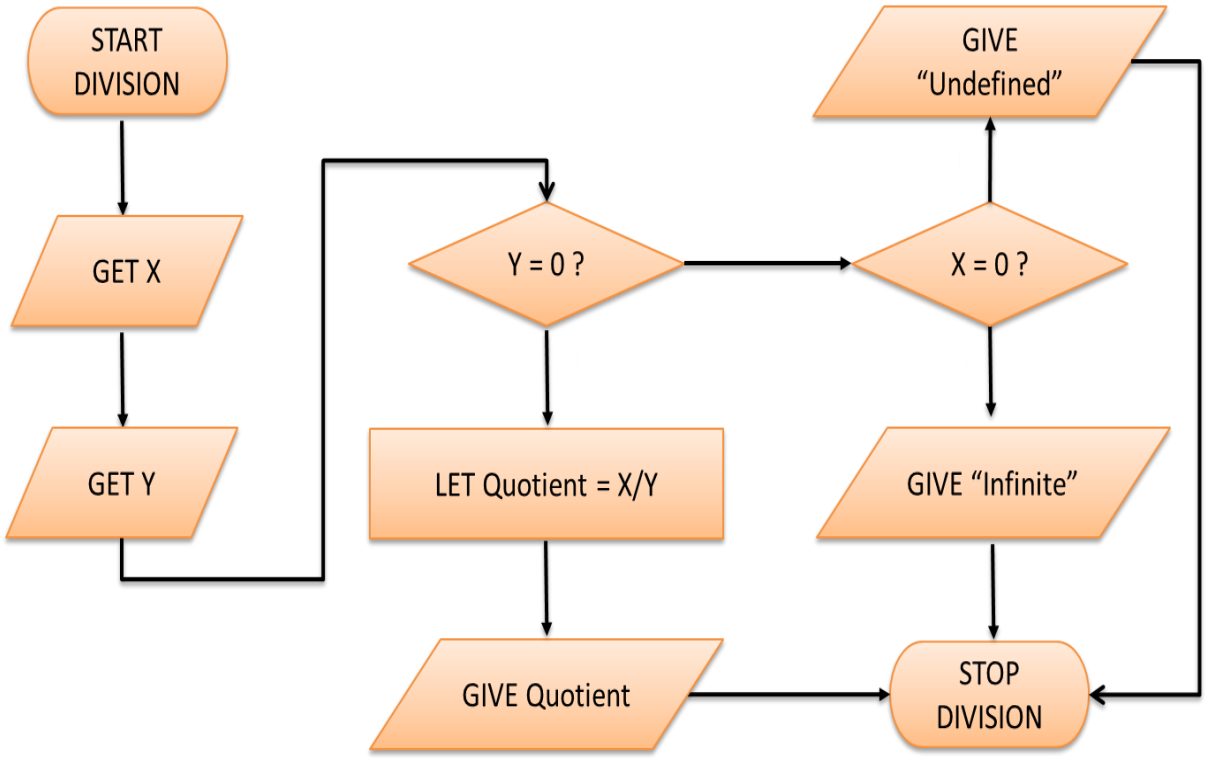
	METHOD	Line	X	Y	Z	PRODUCT
(1)	GET X	1	2			
(2)	GET Y	2		9		
(3)	GET Z	3			6	
(4)	LET PRODUCT = X * Y * Z	4				108
(5)	GIVE PRODUCT	5 output 108				

Quiz 2

1. Modifikasi Algoritma 2 (Quotient=X/Y) dengan menambahkan kondisi:
   - Jika Y = 0 dan X = 0, maka Quotient "Infinite"
   - Jika Y = 0 dan X ≠ 0, maka Quotient "Undefined"
   - Selain dua kondisi di atas, tampilkan nilai Quotient
2. Buat flowchart yang merepresentasikan Algoritma pada soal No. 1

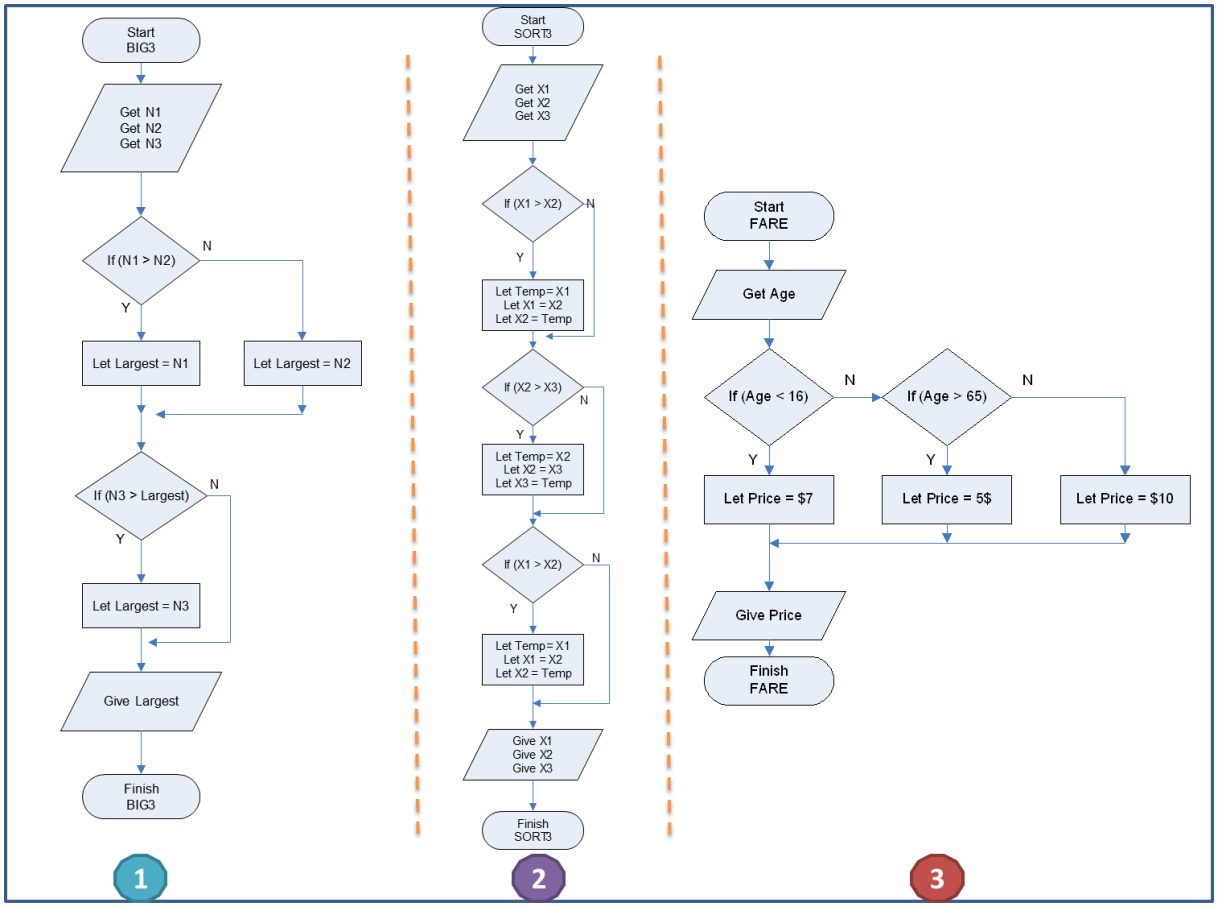
```
NAME : Division
GIVENS     : X, Y
RESULTS    : Quotient
DEFINITION: Quotient := Division(X,Y)
-------------------------
METHOD     :
  DECLARE
  num X
  num Y
  num Quotient
     GET X
     GET Y
     IF Y = 0
          IF X = 0
               GIVE "Undefined"
          ELSE
               GIVE "Infinite"
       END IF
     ELSE
          LET Quotient = X/Y
     END IF

     GIVE Quotient
```



Quiz 3

- Tulislah algoritma (deskripsi & method) berdasarkan flowchart dengan menerapkan aturan dalam penulisan pseudocode



Jawaban No. 1

```
NAME    : BIG3
GIVENS  : N1, N2, N3
RESULTS: Largest
DEFINITION: Largest := BIG3(N1,N2,N3)
-------------------------
METHOD          :
 DECLARE
 num N1
 num N2
 num N3
 num Largest
        GET N1
        GET N2
        GET N3
        IF N1 > N2
                LET Largest = N1
        ELSE
                LET Largest = N2
        END IF
        IF N3 > Largest
                LET Largest = N3
        END IF

        GIVE Largest
```

Jawaban No. 2

```
NAME    : SORT3
GIVENS  : X1, X2, X3
INTERMEDIATE: Temp
DEFINITION: SORT3(X1,X2,X3)
-------------------------
METHOD  :
  DECLARE
  num X1
  num X2
  num X3
  num Temp

  GET X1
  GET X2
  GET X3

  IF X1 > X2
    LET Temp = X1
    LET X1 = X2
    LET X2 = Temp
  END IF
```

```
  IF X2 > X3
    LET Temp = X2
    LET X2 = X3
    LET X3 = Temp
  END IF

  IF X1 > X2
    LET Temp = X1
    LET X1 = X2
    LET X2 = Temp
  END IF

  GIVE X1
  GIVE X2
  GIVE X3
```

Jawaban No. 3

```
NAME    : FARE
GIVENS  : Age
DEFINITION: FARE(Age)
-------------------------
METHOD  :
  DECLARE
  num Age
  string Price

  GET Age

  IF Age < 16
    LET Price = '$7'
  ELSE IF Age > 65
    LET Price = '$5'
  ELSE
    LET Price = '$10'
  END IF

  GIVE Price
```