

Exercise 1.2

(a), (b)

```

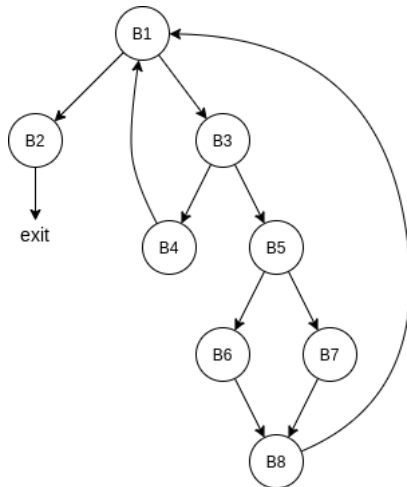
1      receive n
2      sum ← 0
3      i ← 2
4      j ← 0
5      L1: t1 ← i * i
6      if t1 ≤ n goto L2
7      return sum
8      L2: t2 ← n % i
9      if t2 == 0 goto L3
10     i ← i + 1
11     goto L1
12     L3: t3 ← n / i
13     if j == t3 goto L4
14     t4 ← j
15     goto L5
16     L4: t4 ← 0
17     L5: t5 ← i + t4
18     t6 ← sum + t5
19     sum ← t6
20     i ← i + 1
21     goto L1

```

Red annotations in the original image:

- Lines 1-7 are grouped by a red bracket labeled **B1**.
- Line 7 is labeled **B2** in red.
- Lines 8-11 are grouped by a red bracket labeled **B3**.
- Line 10 is labeled **B4** in red.
- Lines 12-13 are grouped by a red bracket labeled **B5**.
- Lines 14-15 are grouped by a red bracket labeled **B6**.
- Line 16 is labeled **B7** in red.
- Lines 17-21 are grouped by a red bracket labeled **B8**.

(c)



(d)

B1 post-dominates nodes B3, B4, B5, B6, B7, B8.
 B2 post-dominates every other node.
 B8 post-dominates B5, B6, B7.