Write the running time of each code fragment as the best Big O function of \boldsymbol{n} .

| 1. | for (i=1; i<=n; i++) | |
|------------|---------------------------|--|
| | k++; | |
| | | |
| 2 | for (i-1: i -1000: i - 1) | |
| 2. | for (i=1; i<=1000; i++) | |
| | k++; | |
| | | |
| 3. | for (i=1; i<=n; i++) | |
| | for (j=1; j<=i; j++) | |
| | k++; | |
| | 17 1 1 | |
| | | |
| 4. | for (i=1; i<=n; i++) | |
| | for (j=i; j<=n; j++) | |
| | k++; | |
| | | |
| 5. | for (i=1; i<=n; i++) | |
| | for (j=i; j<=n; j++) | |
| | for (k=1; k<=j; k++) | |
| | _ | |
| | m++; | |
| | | |
| 6. | for (i=1; i<=n; i++) | |
| | for (j=1; j<=200; j++) | |
| | for $(k=1; k<=5000; k++)$ | |
| | m++; | |
| | | |
| 7. | k=1; | |
| ' • | | |
| | for (i=1; i<=n; i++) | |
| | k*=2; | |
| | for (j=1; j<=k; j++) | |
| | m++; | |
| | | |
| 8. | k=1; | |
| | for (i=1; i<=n; i++) | |
| | k*=2; | |
| | | |
| | for (j=1; j<=k; j*=2) | |
| | m++; | |
| | | |
| 9. | for (j=1; j*j<=n; j++) | |
| | k++; | |
| | | |
| 10. | for (k=1; k<=n; k*=2) | |
| | j++; | |
| | JTTI | |
| | | |

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11.
     for (k=1; k \le n; k^*=2)
         for (j=1; j<=n; j++)
             m++i
     for (k=1; k<=n; k++)
12.
         for (j=1; j<=k; j*=2)
             m++i
     for (k=1; k \le n; k \le 2)
13.
         for (j=1; j<=k; j++)
             m++;
     for (i=1; i<=n; i*=2)
14.
         for (j=1; j<=n; j*=2)
             k++;
15.
     k=0;
     for (i=1; i<=n; i*=2)
         k++;
     for (j=1; j<=k; j++)
         m++;
16.
     k=1;
     for (i=1; i<=n; i++)
         k*=i;
     for (j=1; j<=k; j++)
          m++;
     for (i=1; i<=n; i++)
17.
         for (j=1; j<=n; j++)
              if (i==j)
                 for (k=1; k<=n; k++)
                     m++;
18.
     for (i=1; i<=n; i++)
         for (j=1; j<=n; j++)
              if (i!=j)
                 for (k=1; k<=n; k++)
                     m++;
19.
     k=1;
     for (j=1; j \le n; j+=k)
         k+=2;
20.
     m=n*n*n;
     while (m>=0)
         m-=n;
```