Exercises 6

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5.4

There is an Euler circuit. a -> b -> c -> d -> h -> i -> c -> g -> d -> e -> c -> a -> i -> b -> h -> e -> f -> g -> h -> a

5.11

There is an Euler path. a -> d -> e -> d -> b -> e -> b -> c -> e -> c -> b -> a -> e

5.14

a) K_n has an Euler circuit when n is even.

b) C_n has an Euler circuit for all n.

c) W_n has not Euler circuit for all n.

a) Q_n has an Euler circuit when n is even.

5.17

There has not Hamilton circuit. As agf has one degree.

6.3

a -> c -> d -> e -> g -> z

6.6

```
void dijkstra(int a, int n) {
    for(int i = 0; i <= n; i++) d[i] = DINF; d[a] = 0;
    q.push(make_pair(0, a));
    while (!q.empty()) {
        P x = q.top(); q.pop();
        if (d[x.second] != x.first) continue;
        for (int u = x.second, i = head[u], v; i; i = e[i].nxt) {
            v = e[i].to;
            if (d[v] < d[u] + e[i].w) continue;
                d[v] = d[u] + e[i].w;
                q.push(make_pair(d[v], v));
        }
    }
}
```