

# 1 SQL und Relationenalgebra

## 1.1 (a)

$\Pi_{kname}(\sigma_{(k_{alter}) > 40} \text{mitarbeiter})$

## 1.2 (b)

$\Pi_{bID}(\sigma_{(dk_{redithoehe}) > 20000}(\text{darlehen} \bowtie (\sigma_{aort = 'München'}(\text{mitarbeiter} \bowtie \text{adresse} \bowtie \text{bankkonto}))))$

## 1.3 (c)

```
SELECT kname, kalter, aplz
FROM kunde NATURAL JOIN adresse
ORDER BY kalter DESC
```

## 1.4 (d)

```
SELECT mname, anzahlanbankkonten
FROM ....
WHERE malter ≥ 30 AND

    (SELECT COUNT(*) AS anzahlanbankkonten
     FROM mitarbeiter NATURAL JOIN bankkonto
     GROUP BY mid
    )
```

## 1.5 (e)

```
SELECT DISTINCT kname, COUNT(.....) AS kreditanzahl
FROM kunde NATURAL JOIN darlehen
WHERE COUNT(dkunde = kid) > 1 AND ... (dKredithoehe ≥ (SUM dKredithoehe) ÷
(COUNT dKredithoehe))
```

## 1.6 (f)