Solution

Solution 5a

```
CREATE VIEW VoteSummary AS
        SELECT cityname , 100* votecount /( SELECT SUM ( votecount ) FROM Votes ) AS
           percentage
        FROM Votes
        ORDER BY percentage DESC ;
```

Solution 5b

```
CREATE OR REPLACE FUNCTION updateNotVoted () RETURNS TRIGGER AS $$
        BEGIN
                IF NOT EXISTS ( SELECT * FROM Votes WHERE cityname = '<not␣
                   voted >')
                THEN
                INSERT INTO Votes ( cityname , votecount ) VALUES ('<not␣voted >'
                   , 0);
                END IF ;

                UPDATE Votes SET votecount = 1337 -( SELECT SUM ( votecount ) FROM
                    Votes WHERE cityname <> '<not␣voted >') WHERE cityname = '
                   <not␣voted >';
                RETURN NULL ;
        END
$$ LANGUAGE 'plpgsql ';

CREATE TRIGGER updateNotVotedTrigger
        AFTER INSERT OR UPDATE ON Votes
        FOR EACH ROW WHEN ( NEW . cityname <> '<not␣voted >')
        EXECUTE PROCEDURE updateNotVoted ();
```