Price Breakdown

breakdown of price properties

Preferred layout:

```
"price": {
  "breakdown": {
    "discount":-11.22
    "parking": 2
    "route": 65
    "toll": 5
    "waiting": 2.8
  }
  "currency": "EUR"
  "total": 63.58
  "tax": {
    amount: 3.6
    percentage: 6
  }
}
```

Property types

- number

- hidden

- computed

- total

A number is a fixed amount that has been calculated

Hidden is not included in the price calculation breakdown, but is included to demonstrate sub-calculations

Computed is a price calculated using the numbers in the breakdown

Total is the aggregated price based on computed and number properties

Requirements

- The breakdown contains computed and numbers

- VAT is included in all the properties

- Total is the sum of all the properties in the breakdown

In the future, waiting, toll, and parking properties may have their own VAT percentage

In the future, waiting, toll, and parking properties are included in the breakdown, therefore we will assume that they are provided

Including VAT

```
"price": {
  "breakdown": {
    "discount":
    "parking":
    "route":
     "toll":
    "waiting":
  }
  "currency": "EUR"
  "total":
  "tax": {
      amount:
      percentage: 6
  }
}
```

The breakdown, total and currency are properties of the price

As said before, the total must aggregate all properties in the breakdown

The currency is EUR

```json
"price": {
  "breakdown": {
    "discount":
    "parking": 2
    "route": 65
    "toll": 5
    "waiting": 2.8
  }
  "currency": "EUR"
  "total":
  "tax": {
      amount:
      percentage: 6
  }
}
```

Steps:

1. Parking, toll, waiting and route prices are calculated, tax percentage is added

```
"price": {
  "breakdown": {
    "discount": -11.22
    "parking": 2
    "route": 65
    "toll": 5
    "waiting": 2.8
  }
  "currency": "EUR"
  "total":
  "tax": {
      amount:
      percentage: 6
  }
}
```

Steps:

1. Parking, toll, waiting and route prices are calculated, tax percentage is added

2. Discount
   a. Is stated as a positive or negative fixed amount ✔ -11.22
   b. Is negative or positive percentage of subtotal ✔ (-15%) 74.8*-0.15 = -11.22

```
"price": {
  "breakdown": {
    "discount": -11.22
    "parking": 2
    "route": 65
    "toll": 5
    "waiting": 2.8
  }
  "currency": "EUR"
  "total": 63.58
  "tax": {
      amount:
      percentage: 6
  }
}
```

Steps:

1. Parking, toll, waiting and route prices are calculated, tax percentage is added
2. Discount
    a. Is stated as a positive or negative fixed amount
    b. Is negative or positive percentage of subtotal
3. Total is added ✔ 63.58

```json
"price": {
  "breakdown": {
    "discount": -11.22
    "parking": 2
    "route": 65
    "toll": 5
    "waiting": 2.8
  }
  "currency": "EUR"
  "total": 63.58
  "tax": {
      amount: 3.6
      percentage: 6
  }
}
```

Steps:

1. Parking, toll, waiting and route prices are calculated, tax percentage is added
2. Discount
   a. Is stated as a positive or negative fixed amount
   b. Is negative or positive percentage of subtotal
3. Total is added
4. Tax calculated ✔ `63.58 / (100 + tax.percentage) * tax.percentage = 3.6`

Excluding VAT

```
"price": {
  "breakdown": {
    "discount":
    "parking":
    "route":
    "tax":
    "toll":
    "waiting":
  }
  "currency": "EUR"
  "total":
}
```

The breakdown, total and currency are properties of the price

As said before, the total must aggregate all properties in the breakdown

The currency is EUR

```
"price": {
  "breakdown": {
    "discount":
    "parking": 2
    "route": 65
    "tax":
    "toll": 5
    "waiting": 2.8
    "subtotal":
  }
  "currency": "EUR"
  "total":
}
```

Steps:

1. Parking, toll, waiting and route prices are calculated

```json
"price": {
  "breakdown": {
    "discount":
    "parking": 2
    "route": 65
    "tax":
    "toll": 5
    "waiting": 2.8
    "subtotal": 74.8
  }
  "currency": "EUR"
  "total":
}
```

Steps:

1. Parking, toll, waiting and route prices are calculated
2. A subtotal = parking + route + toll + waiting, is calculated

✔ 65+5+2+2.8 = 74.8

```
"price": {
  "breakdown": {
    "discount": -11.22
    "parking": 2
    "route": 65
    "tax":
    "toll": 5
    "waiting": 2.8
    "subtotal": 74.8
  }
  "currency": "EUR"
  "total":
}
```

Steps:

1. Parking, toll, waiting and route prices are calculated
2. A subtotal = parking + route + toll + waiting, is calculated
3. Discount..
   a. Is stated as a positive or negative fixed amount ✔ -11.22
   b. Is negative or positive percentage of subtotal ✔ (-15%) 74.8*-0.15 = -11.22

```json
"price": {
  "breakdown": {
    "discount": -11.22
    "parking": 2
    "route": 65
    "tax": 3.8148
    "toll": 5
    "waiting": 2.8
    "subtotal": 74.8
  }
  "currency": "EUR"
  "total":
}
```

Steps:

1. Parking, toll, waiting and route prices are calculated
2. A subtotal = parking + route + toll + waiting, is calculated
3. Discount..
   a. Is stated as a positive or negative fixed amount
   b. Is negative or positive percentage of subtotal
4. Tax = (discount + subtotal) * tax_percentage

✔ (6%) (-11.22+74.8)*0.06 = 3.8148

```json
"price": {
  "breakdown": {
    "discount": -11.22
    "parking": 2
    "route": 65
    "tax": 3.8148
    "toll": 5
    "waiting": 2.8
    "subtotal": 74.8
  }
  "currency": "EUR"
  "total": 67.3948
}
```

Steps:

1. Parking, toll, waiting and route prices are calculated
2. A subtotal = parking + route + toll + waiting, is calculated
3. Discount..
   a. Is stated as a positive or negative fixed amount
   b. Is negative or positive percentage of subtotal
4. Tax = (discount + subtotal) * tax_percentage
5. Total = discount + subtotal + tax

✔ -11.22+74.8 = 63.58
    +3.8148 = 67.3948

```
"price": {
  "breakdown": {
    "discount": -11.22
    "parking": 2
    "route": 65
    "tax": 3.8148
    "toll": 5
    "waiting": 2.8
    "subtotal": 74.8
  }
  "currency": "EUR"
  "total": 67.5
}
```

Steps:

1. Parking, toll, waiting and route prices are calculated
2. A subtotal = parking + route + toll + waiting, is calculated
3. Discount..
   a. Is stated as a positive or negative fixed amount
   b. Is negative or positive percentage of subtotal
4. Tax = (discount + subtotal) * tax_percentage
5. Total = discount + subtotal + tax
6. Round total price to half a decimal

End

```
"price": {
  "breakdown": {
    "discount": -10.5468
    "parking": 1.88
    "route": 61.1
    "tax": 3.8148
    "toll": 4.7
    "waiting": 2.632
  }
  "currency": "EUR"
  "total":
}
```

Steps:

1. Parking, toll, waiting and route prices are calculated
2. A subtotal = parking + route + toll + waiting, is calculated
3. Discount..
   a. Is stated as a positive or negative fixed amount
   b. Is negative or positive percentage of subtotal
4. Tax = [taxperc * prop : prop in breakdown]
   Mutate prop = [prop - tax : prop in breakdown]

✔ [-11.22, 2, 65, 5, 2.8].map(v => v - v*0.06)
   = [-10.5468, 1.88, 61.1, 4.7, 2.632]

```
"price": {
  "breakdown": {
    "discount": -10.5468
    "parking": 1.88
    "route": 61.1
    "tax": 3.8148
    "toll": 4.7
    "waiting": 2.632
  }
  "currency": "EUR"
  "total": 63.58
}
```

1. Parking, toll, waiting and route prices are calculated
2. A subtotal = parking + route + toll + waiting, is calculated
3. Discount..
   a. Is stated as a positive or negative fixed amount
   b. Is negative or positive percentage of subtotal
4. Tax = (discount + subtotal) * tax_percentage
5. Total = discount + parking + route + tax + toll + waiting

✔ -10.5468+1.88+61.1+3.8148+4.7+2.632 = 63.58

```
"price": {
  "breakdown": {
    "discount": -10.5468
    "parking": 1.88
    "route": 61.1
    "tax": 3.8148
    "toll": 4.7
    "waiting": 2.632
  }
  "currency": "EUR"
  "total": 63.5
}
```

1. Parking, toll, waiting and route prices are calculated
2. A subtotal = parking + route + toll + waiting, is calculated
3. Discount..
   a. Is stated as a positive or negative fixed amount
   b. Is negative or positive percentage of subtotal
4. Tax = (discount + subtotal) * tax_percentage
5. Total = discount + parking + route + tax + toll + waiting
6. Round total price to half a decimal