0.0.1 Remove

The inverse of the *append* Operations.

$$remove(coll, idx) =^{\sim} append(coll, idx)$$

The operation *remove* will return a Collection minus the Value removed from the specified Numeric Index

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┌─ remove[Collection, ℕ] ──────────────────────────────
│ coll? , coll! : Collection
│ idx? : ℕ
│ remove : Collection × ℕ → Collection
├───────────────────────────────────────────────────────
│ coll! = remove(coll? , idx? ) •
│     let coll' == front({ i : ℕ | i ∈ 0 .. idx? } ↾ coll? )
│         coll'' == tail({ j : ℕ | j ∈ idx? .. # coll? } ↾ coll? ) •
│     = coll' ⌢ coll'' ⟹ coll?_{idx?} ∉ coll' ∧ coll?_{idx?} ∉ coll'' ∧ # coll! = # coll? − 1
└───────────────────────────────────────────────────────
```

such that

$$X = \langle x_0, x_1, x_2 \rangle$$
$$x_0 = 0$$
$$x_1 = foo$$
$$x_2 = baz$$

$remove(X, 0) = \langle foo, baz \rangle$ [0 was removed from X]

$remove(X, 1) = \langle 0, baz \rangle$ [foo was removed from X]

$remove(X, 2) = \langle 0, foo \rangle$ [baz was removed from X]

$remove(X, 3) = \langle 0, foo, baz \rangle = X$ [nothing at 3, X unaltered]