```
In[ ]:= A1[C0_, W0_, C1_, W1_, C2_, W2_] = (C1 / W1) / (C0 / W0 + C1 / W1 + C2 / W2)
```

Out[ ]=
$$\frac{C1}{W1\left(\frac{C0}{W0}+\frac{C1}{W1}+\frac{C2}{W2}\right)}$$

```
In[ ]:= norm = 1 / (C0 / W0 + C1 / W1 + C2 / W2)
```

Out[ ]=
$$\frac{1}{\frac{C0}{W0}+\frac{C1}{W1}+\frac{C2}{W2}}$$

```
In[ ]:= n1 = norm / W1
```

Out[ ]=
$$\frac{1}{W1\left(\frac{C0}{W0}+\frac{C1}{W1}+\frac{C2}{W2}\right)}$$

```
In[ ]:= n2 = norm / W2
```

Out[ ]=
$$\frac{1}{\left(\frac{C0}{W0}+\frac{C1}{W1}+\frac{C2}{W2}\right)W2}$$

Different elements

```
In[ ]:= D[A1[C0, W0, C1, W1, C2, W2], C2] == -C1 n1 n2
```

Out[ ]= True

```
In[ ]:= D[A1[C0, W0, C1, W1, C2, W2], W2] == C1 C2 / W2 (n1 n2)
```

Out[ ]= True

Same elements

```
In[ ]:= Simplify[D[A1[C0, W0, C1, W1, C2, W2], C1] == n1 (1 - C1 n1)]
```

Out[ ]= True

```
In[ ]:= Simplify[D[A1[C0, W0, C1, W1, C2, W2], W1] == (C1 / W1) (n1 (C1 n1 - 1))]
```

Out[ ]= True