

3c. Check of exponentiation map

Checks for (2.29), (2.39) and §3.1

expc checks the exponential by comparison with the routine **MatrixExp**

Check for **n**

```
In[ * ]:= expc[XX0, nm[0, t / 2]]
          expc[XX1, nm[t, 0, 0]]
          expc[XX2, nm[0, t, 0]]
          expc[HHr, am[E ^ t]]
```

```
Out[ * ]= True
```

```
Out[ * ]= True
```

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Out[ * ]= True
```

```
Out[ * ]= True
```

Checks for **k**

```
In[ * ]:= expc[HHi, mm[E ^ (I t)]]
          expc[WW1, km[1, Cos[t], Sin[t]]]
          expc[WW2, km[1, Cos[t], I Sin[t]]]
          expc[WW2, {{Cos[t], I Sin[t], 0}, {I Sin[t], Cos[t], 0}, {0, 0, 1}}]
          expc[WW0, km[1, E ^ (I t), 0]]
          expc[CKi, km[E ^ (I t), 1, 0]]
```

```
Out[ * ]= True
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Out[ * ]= True
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Out[ * ]= True
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Out[ * ]= True
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