*: Scale Factor

> **What**: Scale a vector
> **Why**: Computations to alter the length and direction of a vector
> **Time To Complete**: 1-3 hours



Multiply a vector by a numeral from the **left**.

```
v  =  5.4 * {x,y};

show  v;

save as scale;
```

Multiply a vector by a numeral from the **right**.

```
v  =   {x,y}*5.4;

show  v;

save as scale;
```

Output

```
"v" → {5.4*x, 5.4*y}
```

u ought to be a variable/symbol or a numeral. **u** cannot be another vector.

```
v  =  u * {a, b, c, d, e, f};

show  v;

save as scale;
```

Output

```
"v" → {a*u, b*u, c*u, d*u, e*u, f*u}
```

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