```
Needs["VectorAnalysis`"]

A = {1 / 2 {1, 0, 1}, {0, 0, 1}, {0, 1 / 2, 1 / 2}};

B = Inverse[Transpose[A]]
```
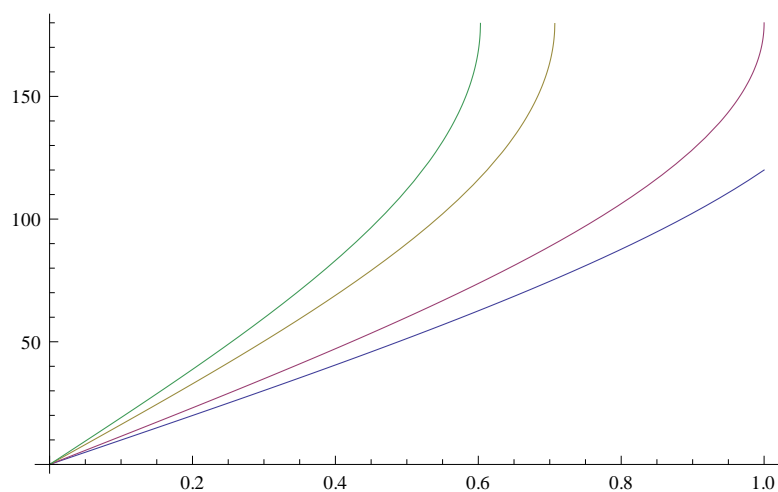
{{2, 0, 0}, {-1, -1, 1}, {0, 2, 0}}

```
b = Sort[Transpose[
     Tally[Flatten[Table[Table[Table[Norm[h B[[1]] + k B[[2]] + l B[[3]]], {h, -5, 5}],
        {k, -5, 5}], {l, -5, 5}], 3]]][[1]], #1 < #2 &][[2 ;; 5]]
```

$\left\{ \sqrt{3}, 2, 2\sqrt{2}, \sqrt{11} \right\}$

```
T = 2 ArcSin[x / 2 * b] / Pi * 180;

Plot[{T}, {x, 0, 1}]
```



```
Solve[T[[1]] == 42.2, x]
T /. %
```

{{x → 0.415689}}

{{42.2, 49.1254, 72.0123, 87.156}}

```
1.5 / 0.4156885081510353
```

3.60847