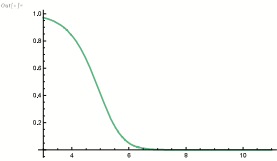



```
in1)-> 111=Plot[{{(p[p0,R1,a1,x1,r,b1])^5}/.R1->R01/.p0->0.17/.a1->0.55/.x1->0/.b1->b1,
(r,3,11)]
```



```
in1)-> FindRoot[Sum[dy[(p[p0,R1,a1,x1,r,b1]^2-ppp2[p0,R1,x1,r,b1])^2],(r,4,8,0.1)]=0,
Sum[dy[(p[p0,R1,a1,x1,r,b1]^2-ppp2[p0,R1,x1,r,b1])^2],(r,4,8,0.1)]=0],
{yy,1.2},{bb0,1}]/.R1->R01/.p0->0.17/.a1->0.55/.x1->0/.b1->b1
```

FindRoot: The function value

$$\left(\frac{1}{2} \left(\frac{0.010472271828^{4-(1+1)R_1}}{(1+Power[w2,w])^2} - 0.0182648 (0.1734 Power[w2,w]) Power[w2,w] - 0.0578 Power[w2,w] Power[w2,w]) \right. \right. \\ \left. \left. R_1^2 \right) \left(\frac{0.0289}{(1+Power[w2,w])^2} - 1.2 (0.010472 Power[w2,w] Power[w2,w] R_1 + 0.0182648 Power[w2,w] Power[w2,w]) \right. \right. \\ \left. \left. w_2 \right) + \frac{0.0289 \sinh[\text{Times}[2,w]^2]}{(720.237 + \cosh[w_1 w_2])^2} + \infty 39 w + 2 (w_1 w) \left(- \frac{0.0289}{(1+Power[w2,w])^2} - 1.2 (0.010472 \right. \right. \\ \left. \left. Power[w2,w] w_1 R_1 + w_1 w) + \frac{0.0289 \sinh[w_1 w_2]^2}{(w_2 1 w + \cosh[w_1 w_2])^2} - w_1 w \right) \right) \text{ is}$$

not a list of numbers with dimensions {2} at {yy, bb0} = {1.2, 1}.

```
Out1)-> {yy->1.0285,bb0->0.682526}
```

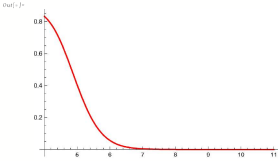
```
in1)-> yy=1.03
```

```
Out1)-> 1.03
```

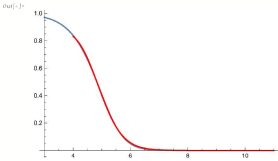
```
in1)-> bb0=0.68
```

```
Out1)-> 0.68
```

```
in1)-> 122=Plot[{{ppp2[p0,R1,x1,r,b1]}/.R1->R01/.p0->0.17/.a1->0.55/.x1->0/.b1->b1,
(r,4,11),ColorFunction->Function[{Red]}]
```

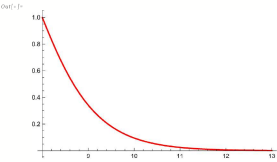


```
in1)-> Show[111,122]
```

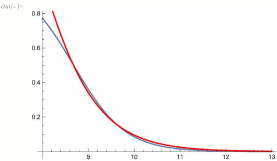


```
in1)-> Clear[bb0,y,bb0,yy,r]
```

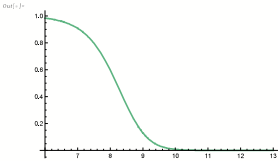
```
in1)-> 1222=Plot[{{(1/p0 (p0/(1+e^(x/10)) + y*(R2+dy2(p0/(1+e^(x/10)) + b2*SphericalHarmonicY[2,0,x2,phi]+R2+R2/2 *
dy2 dy2 (p0/(1+e^(x/10)) + (b2*SphericalHarmonicY[2,0,x2,phi])^2)))/.R2->R02/.
p0->0.17/.a2->a2/.x2->0/.b2->b2,(r,8,13),ColorFunction->Function[{Red}]}
```



```
in1)-> Show[1111,1222]
```



```
in1)-> 11111=
Plot[{{(p[p0,R2,a2,x2,r,b2])^5}/.R2->R02/.p0->0.17/.a2->0.57/.x2->0/.b2->0.892,
(r,6,13)]
```



```
in1)-> FindRoot[Sum[dy[(p[p0,R2,a2,x2,r,b2]^2-ppp2[p0,R2,x2,r,b2])^2],(r,7,12,0.1)]=0,
Sum[dy[(p[p0,R2,a2,x2,r,b2]^2-ppp2[p0,R2,x2,r,b2])^2],(r,7,12,0.1)]=0],
{yy,2},{bb0,1}]/.R2->R02/.p0->0.17/.a2->a2/.
x2->0/.b2->b2
```

FindRoot: The function value

$$\left(\frac{1}{2} \left(\frac{0.020563271828^{4-(1+1)R_2}}{(1+Power[w2,w])^2} - 0.0632832 (0.1734 Power[w2,w]) Power[w2,w] - 0.0578 Power[w2,w] Power[w2,w]) \right. \right. \\ \left. \left. R_2^2 \right) \left(\frac{0.0289}{(1+Power[w2,w])^2} - 2. (0.020563 Power[w2,w] Power[w2,w] R_2 + 0.0632832 Power[w2,w] Power[w2,w]) \right. \right. \\ \left. \left. \frac{0.0289 \sinh[\text{Times}[2,w]^2]}{(141488 + \cosh[w_1 w_2])^2} + \infty 49 w + w_1 w) \right(- \frac{0.0289}{(1+Power[w2,w])^2} - 2. (0.020563 \right. \right. \\ \left. \left. \text{Power[w2,w] } w_1 R_2 + w_1 w) \right) \right) \text{ is not a list of}$$

numbers with dimensions {2} at {yy, bb0} = {2, 1}.

```
Out1)-> {yy->1.35007,bb0->1.25094}
```

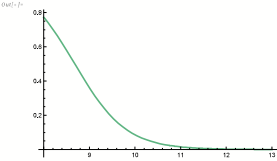
```
in1)-> yy=1.35
```

```
Out1)-> 1.35
```

```
in1)-> bb0=1.25
```

```
Out1)-> 1.25
```

```
in1)-> 1111=Plot[
{(p[p0,R2,a2,x2,r,b2])^5}/.R2->R02/.p0->0.17/.a2->0.57/.x2->0/.b2->b2,(r,8,13)]
```



```
in1)-> FindRoot[Sum[dy[(p[p0,R2,a2,x2,r,b2]-ppp[p0,R2,x2,r,b2])^2],(r,8.5,12,0.1)]=0,
Sum[dy[(p[p0,R2,a2,x2,r,b2]-ppp[p0,R2,x2,r,b2])^2],(r,8.5,12,0.1)]=0],
{y,1.1},{b0,0.8}]/.R2->R02/.p0->0.17/.a2->a2/.x2->0/.b2->b2
```

FindRoot: The function value (w1 w, w1 w) is not a list of numbers with dimensions {2} at {y, b0} = {1.1, 0.8}.

```
Out1)-> {y->1.21255,b0->0.74044}
```

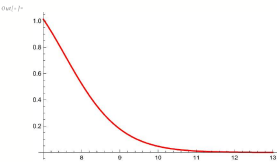
```
in1)-> y=1.21
```

```
Out1)-> 1.21
```

```
in1)-> b0=0.74
```

```
Out1)-> 0.74
```

```
in1)-> 12222=Plot[
(1/p0 (p0/(1+e^(x/10)) + yy*(R2+dy2(p0/(1+e^(x/10)) + b2*SphericalHarmonicY[2,0,x2,phi]+R2+R2/2 *
dy2 dy2 (p0/(1+e^(x/10)) + (b2*SphericalHarmonicY[2,0,x2,phi])^2)))/.R2->R02/.
p0->0.17/.a2->a2/.x2->0/.b2->b2,(r,7,13),ColorFunction->Function[{Red}]}
```



```
in1)-> Show[11111,12222]
```

