In[1758]:=
```
ClearAll[a1, m1, m2, n, M, f1, f2, b1, x1, x2]
```

In[1759]:=

```
M = m1 + m2;
n = (m1 * m2) * ((m1 + m2)^(-2));
```

In[1761]:=
```
x1 = (M * 3.14 * f1)^(2 / 3);
x2 = (M * 3.14 * f2)^(2 / 3);
```

In[1763]:=
```
m1 = 10 * 4.92549095 * 10^-6;
```

In[1764]:=
```
m2 = 10 * 4.92549095 * 10^-6;
```

In[1765]:=

In[1766]:=
```
f1 = 10;
f2 = 220;
```

In[1768]:=
```
a1 = -(32^-1) (1 / n) x1^(-5 / 2);
b1 = -(32^-1) (1 / n) x2^(-5 / 2);
c1 = (b1 - a1) / 3.14;
a2 = -(32^-1) (1 / n) x1^(-3 / 2) ((3715 / 1008) + ((55 / 12) * n));
b2 = -(32^-1) (1 / n) x2^(-3 / 2) ((3715 / 1008) + ((55 / 12) * n));
c2 = (b2 - a2) / 3.14;
a3 = ((32^-1) (1 / n) x1^(-1)) * (10 * 3.14);
b3 = ((32^-1) (1 / n) x2^(-1)) * (10 * 3.14);
c3 = (b3 - a3) / 3.14;
a4 = -((32^-1) (1 / n) x1^(-1 / 2)) *
    ((15 293 365 / 1 016 064) + ((27 145 / 1008) * n) + ((3085 / 144) * n^(2)));
b4 = -((32^-1) (1 / n) x2^(-1 / 2)) *
    ((15 293 365 / 1 016 064) + ((27 145 / 1008) * n) + ((3085 / 144) * n^(2)));
c4 = (b4 - a4) / 3.14;
a5 = -((32^-1) (1 / n) * (3.14)) * ((38 645 / 1344) - ((65 / 16) * n)) * (Log[x1 / x1]);
b5 = -((32^-1) (1 / n) * (3.14)) * ((38 645 / 1344) - ((65 / 16) * n)) * (Log[x2 / x1]);
c5 = (b5 - a5) / 3.14;
a6 = -((32^-1) (1 / n) x1^(1 / 2)) * ((12 348 611 926 451 / 18 776 862 720) -
      ((160 / 3) * 3.14^(2)) - ((1712 / 21) * 0.577) - ((856 / 21) * (Log[16 * x1])) +
      (((-15 737 765 635 / 12 192 768) + ((2255 / 48) * 3.14^(2))) * n) +
      ((76 055 / 6912) * n^(2)) - ((127 825 / 5184) * n^(3)));
b6 = -((32^-1) (1 / n) x2^(1 / 2)) * ((12 348 611 926 451 / 18 776 862 720) -
      ((160 / 3) * 3.14^(2)) - ((1712 / 21) * 0.577) - ((856 / 21) * (Log[16 * x2])) +
      (((-15 737 765 635 / 12 192 768) + ((2255 / 48) * 3.14^(2))) * n) +
      ((76 055 / 6912) * n^(2)) - ((127 825 / 5184) * n^(3)));
c6 = (b6 - a6) / 3.14;
a7 = -((32^-1) (1 / n) * (3.14) * x1) *
    ((77 096 675 / 2 032 128) + ((378 515 / 12 096) * n) - ((74 045 / 6048) * n^(2)));
b7 = -((32^-1) (1 / n) * (3.14) * x2) *
    ((77 096 675 / 2 032 128) + ((378 515 / 12 096) * n) - ((74 045 / 6048) * n^(2)));
c7 = (b7 - a7) / 3.14;
```

In[1789]:=
```
c1
c2
c3
c4
c5
c6
c7
```

Out[1789]= 602.712

Out[1790]= 59.3521

Out[1791]= −51.3811

Out[1792]= 4.06297

Out[1793]= −7.14497

Out[1794]= 2.17844

Out[1795]= −0.818111