MTH 42, Fall 2024

Nikos Apostolakis

Higher degree equations

1. Solve the following equations:
   (a) $5\,(3\,x-7)=0$.
   (b) $3\,x\,(x-1)=0$.
   (c) $(x-1)(x+3)(2\,x+5)=0$.
   (d) $2\,x\,(3\,x-1)\,(x^2+1)=0$.
   (e) $(x+7)^2(x-2)\,(x+1)=0$.
2. Solve the following equations:
   (a) $x^2-7\,x=0$.
   (b) $x^2-64=0$.
   (c) $x^2-64\,x=0$.
   (d) $3\,x^3-75\,x=0$.
   (e) $x^2-x-6=0$.
   (f) $x^2+x-6=0$.
   (g) $x^2-12\,x+35=0$.
   (h) $x^2+16\,x+55=0$.
   (i) $6\,x^2-5\,x+1=0$.
   (j) $3\,x^2+12=0$.
   (k) $2\,x^2-10\,x+12=0$.
   (l) $6\,x^2-17\,x+12=0$.
   (m) $x^2-4\,x+13=0$.
   (n) $5\,x^2+12\,x-9=0$.
   (o) $6\,x^2+5\,x-6=0$.
   (p) $4\,x^2+20\,x+25=0$.
   (q) $x^4-81=0$.
   (r) $3\,x^3=12\,x$
   (s) $x^2+4\,x+2=7$.
   (t) $x^3=4\,x$.
   (u) $x^2+8\,x+6=3\,x$.
   (v) $2\,x\,(x+11)=13\,x+5$.
   (w) $(x-2)\,(x-3)=x+1$.