1 Question 7

1.1 a)

(% i15) fraca: 1695/2599;

(calc) $\dfrac{15}{23}$

(% i16) float(fraca);

(% o16) 0.6521739130434783

1.2 b)

(% i20) expb: 2*%pi-(%pi/3)+sqrt(2)+sqrt(8);

(expb) $\dfrac{5\pi}{3} + 3\sqrt{2}$

1.3 c)

(% i22) expc: 2*x^ 3 + 9*x^ 2 +7*x -6;

(expc) $2x^3 + 9x^2 + 7x - 6$

(% i24) factor(expc);

(% o24) $(x+2)\,(x+3)\,(2x-1)$

1.4 d)

(% i25) eqnd: 3*x^ 3 +5*x^ 2-26*x +8=0;

(eqnd) $3x^3 + 5x^2 - 26x + 8 = 0$

(% i26) solve(eqnd, x);

(% o26) $\left[x = -4\,, x = \dfrac{1}{3}\,, x = 2\right]$

1.5　e)

eqne: q=(2*r*s +1)/(s+t);

(eqne)　$q = \dfrac{2rs + 1}{t + s}$

solve(eqne, s);

(% o29)　$\left[s = \dfrac{qt - 1}{2r - q} \right]$

2