Distributivité

Niveau de difficulté : difficile

1 Enoncé

Développer et réduire les expressions suivantes :

A=$(-4y+44)(47-50y)$

B=$(-23+t)(35t+9)$

C=$(42t+27)(49-7t)$

D=$(-5-37y)(-21+34y)$

E=$(-47+47z)(-5z+43)$

F=$(-3+13t)(-8t+19)$

G=$(9x+31)(50x+26)$

H=$(-44t+5)(20+21t)$

I=$(-20z-31)(-28-15z)$

J=$(-17z-24)(-44z+33)$

K=$(49-15x)(33x+4)$

L=$(-17y-28)(14-23y)$

M=$(9t+29)(-6t-44)$

N=$(7t-15)(-50t+12)$

O=$(-29x+31)(27x+1)$

P=$(7y-11)(9y-6)$

Q=$(-6t-20)(34-39t)$

R=$(16-45y)(-1+17y)$

S=$(45-15y)(34+49y)$

T=$(22x+15)(26-49x)$

2 Corrigé

$A=(-4y+44)(47-50y)$
$A=-4y\times 47-4y\times(-50y)+44\times 47+44\times(-50y)$
$A=-188y+200y^2+2068-2200y$
$A=200y^2-188y-2200y+2068$
$A=200y^2-2388y+2068$

$B=(-23+t)(35t+9)$
$B=-23\times 35t-23\times 9+t\times 35t+t\times 9$
$B=-805t-207+35t^2+9t$
$B=35t^2-805t+9t-207$
$B=35t^2-796t-207$

$C=(42t+27)(49-7t)$
$C=42t\times 49+42t\times(-7t)+27\times 49+27\times(-7t)$
$C=2058t-294t^2+1323-189t$
$C=-294t^2+2058t-189t+1323$
$C=-294t^2+1869t+1323$

$D=(-5-37y)(-21+34y)$
$D=-5\times(-21)-5\times 34y-37y\times(-21)-37y\times 34y$
$D=105-170y+777y-1258y^2$
$D=-1258y^2-170y+777y+105$
$D=-1258y^2+607y+105$

$E=(-47+47z)(-5z+43)$
$E=-47\times(-5z)-47\times 43+47z\times(-5z)+47z\times 43$
$E=235z-2021-235z^2+2021z$
$E=-235z^2+235z+2021z-2021$
$E=-235z^2+2256z-2021$

$F=(-3+13t)(-8t+19)$
$F=-3\times(-8t)-3\times 19+13t\times(-8t)+13t\times 19$
$F=24t-57-104t^2+247t$
$F=-104t^2+24t+247t-57$
$F=-104t^2+271t-57$

$G=(9x+31)(50x+26)$
$G=9x\times 50x+9x\times 26+31\times 50x+31\times 26$
$G=450x^2+234x+1550x+806$
$G=450x^2+1784x+806$

$H=(-44t+5)(20+21t)$
$H=-44t\times 20-44t\times 21t+5\times 20+5\times 21t$
$H=-880t-924t^2+100+105t$
$H=-924t^2-880t+105t+100$
$H=-924t^2-775t+100$

$I=(-20z-31)(-28-15z)$
$I=-20z\times(-28)-20z\times(-15z)-31\times(-28)-31\times(-15z)$
$I=560z+300z^2+868+465z$
$I=300z^2+560z+465z+868$
$I=300z^2+1025z+868$

$J=(-17z-24)(-44z+33)$
$J=-17z\times(-44z)-17z\times 33-24\times(-44z)-24\times 33$
$J=748z^2-561z+1056z-792$
$J=748z^2+495z-792$

$K=(49-15x)(33x+4)$
$K=49\times 33x+49\times 4-15x\times 33x-15x\times 4$
$K=1617x+196-495x^2-60x$
$K=-495x^2+1617x-60x+196$
$K=-495x^2+1557x+196$

$L=(-17y-28)(14-23y)$
$L=-17y\times 14-17y\times(-23y)-28\times 14-28\times(-23y)$
$L=-238y+391y^2-392+644y$
$L=391y^2-238y+644y-392$
$L=391y^2+406y-392$

$M=(9t+29)(-6t-44)$
$M=9t\times(-6t)+9t\times(-44)+29\times(-6t)+29\times(-44)$
$M=-54t^2-396t-174t-1276$
$M=-54t^2-570t-1276$

$N=(7t-15)(-50t+12)$
$N=7t\times(-50t)+7t\times 12-15\times(-50t)-15\times 12$
$N=-350t^2+84t+750t-180$
$N=-350t^2+834t-180$

$O=(-29x+31)(27x+1)$
$O=-29x\times 27x-29x\times 1+31\times 27x+31\times 1$
$O=-783x^2-29x+837x+31$
$O=-783x^2+808x+31$

$P=(7y-11)(9y-6)$
$P=7y\times 9y+7y\times(-6)-11\times 9y-11\times(-6)$
$P=63y^2-42y-99y+66$
$P=63y^2-141y+66$

$Q=(-6t-20)(34-39t)$
$Q=-6t\times 34-6t\times(-39t)-20\times 34-20\times(-39t)$
$Q=-204t+234t^2-680+780t$
$Q=234t^2-204t+780t-680$
$Q=234t^2+576t-680$

$R=(16-45y)(-1+17y)$
$R=16\times(-1)+16\times 17y-45y\times(-1)-45y\times 17y$
$R=-16+272y+45y-765y^2$
$R=-765y^2+272y+45y-16$
$R=-765y^2+317y-16$

$S=(45-15y)(34+49y)$
$S=45\times 34+45\times 49y-15y\times 34-15y\times 49y$
$S=1530+2205y-510y-735y^2$
$S=-735y^2+2205y-510y+1530$
$S=-735y^2+1695y+1530$

$T=(22x+15)(26-49x)$
$T=22x\times 26+22x\times(-49x)+15\times 26+15\times(-49x)$
$T=572x-1078x^2+390-735x$
$T=-1078x^2+572x-735x+390$
$T=-1078x^2-163x+390$