1) $7\cdot\begin{bmatrix}5 & 10\\ 7 & 12\\ 11.3 & 5\\ 25 & 30\end{bmatrix}+2\cdot\begin{bmatrix}5 & 10\\ 7 & 12\\ 11.3 & 5\\ 25 & 30\end{bmatrix}=9\cdot\begin{bmatrix}5 & 10\\ 7 & 12\\ 11.3 & 5\\ 25 & 30\end{bmatrix}=\begin{bmatrix}45 & 90\\ 63 & 108\\ 101.7 & 45\\ 225 & 270\end{bmatrix}$

2.1) $\begin{cases}3x-2y+5z=7\\ 7x+4y-8z=3\\ 5x-3y-4z=-12\end{cases}$

1) $2y=3x+5z-7,\ y=1.5x+2.5z-3.5$

2) $7x+4(1.5x+2.5z-3.5)-8z=3,\ 7x+6x+10z-14-8z=3,\ 13x+2z=17,$
$2z=17-13x,\ z=8.5-6.5x$

3) $5x-3(1.5x+2.5z-3.5)-4z=-12,\ 5x-4.5x-7.5z+10.5-4z=-12,$
$0.5x-11.5z=-22.5,\ 0.5x-11.5(8.5-6.5x)=-22.5,$
$0.5x-97.75+74.75x=-22.5,\ 75.25x=75.25,\ x=1$

4) $z=8.5-6.5x=8.5-6.5\cdot1=2$
$y=1.5x+2.5z-3.5=1.5\cdot1+2.5\cdot2-3.5=3$

Ответ: $x=1, y=3, z=2$. Линейная система

2.2) $\begin{cases}x^2+y\cdot x-9=0\\ x-y/5=0\end{cases}\rightarrow y=5x,\ x^2+5x\cdot x-9=0,\ x^2+5x^2=9,\ 6x^2=9,\ x^2=\frac{9}{6}=\frac{3}{2}$

$x=\pm\sqrt{\frac{3}{2}}$

$y=\pm5\sqrt{\frac{3}{2}}$

3) $S=48,\ P=28,$

$\begin{cases}a\cdot b=48\\ 2(a+b)=28\end{cases}\rightarrow a+b=14,\ a=14-b$

1) $(14-b)\cdot b=48,\ 14b-b^2=48,\ b^2-14b+48=0$

$D=b^2-4ac,\ (-14)^2-4\cdot1\cdot48=196-192=4,\ D>0\rightarrow x_{1,2}=\frac{-b\pm\sqrt{D}}{2a}$

$b_{1,2}=\frac{-(-14)\pm\sqrt{4}}{2\cdot1}=\frac{14\pm2}{2},\ b_1=8,\ b_2=6,\ a_1=14-8=6,\ a_2=14-6=8$

Ответ: длина 8, ширина 6