3-3 3-4

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16. $2(x-2)+9(y-9)-6(z+6)=0$

即 $2x+9y-6z=121$ ✓

18. $3x-7y+5z=4$ ✓

20. $(1,0,0)\times(1,1,9)=(0,-9,1)$

$0(x-5)-9(y-1)+(z-7)=0$

$9y-z=2$ ✓

22. (1) $\frac{1}{-2}=\frac{-2}{4}=\frac{3}{C}\neq\frac{D}{6}$

$\therefore C=-6 \quad D\neq-3$ ✓

(2) $C=-6 \quad D=-3$

25. (1) $\frac{x-1}{3}=\frac{y}{1}=\frac{z+2}{2}$ ✓

(2) $\vec{AB}=(0,1,4)$

$\frac{x-1}{0}=\frac{y}{1}=\frac{z+1}{4}$ ✓

(3) $\frac{x-2}{-1}=\frac{y-3}{3}=\frac{z+5}{4}$ ✓

(4) $(1,1,1)\times(0,1,-1)=(-2,1,1)$

$\frac{x-3}{-2}=\frac{y-1}{1}=\frac{z-2}{1}$ ✓

27. (1) $(3,1,2)\times(1,0,2)=(2,-4,-1)$

$2(x-2)-4(y-2)-(z-1)=0$

$2x-4y-z=-5$ ✓

(2) $(2,1,1)\times(2,3,-1)=(-4,4,4)$

$-4(x-1)+4(y-1)+4(z-1)=0$

$-x+y+z=1$ ✓

(3) 设平面方程为 $(x-y+z+1)+\lambda(x+3y-z)=0$

有 $(1+\lambda, -1+3\lambda, 1-\lambda)\cdot(1,0,2)=0$

解得 $\lambda=3$

$\therefore\ 4x+8y-2z=-1$ ✓

28. $(3,2,-2)\times(2,-3,4)=(2,-16,-13)$

$2(x-7)-16(y-2)-13(z-1)=0$

$2x-16y-13z=-31$ ✓