13. a) \((-4, -2, -1)\)  
   b) \((-2, -1, 0)\)  

15. \[\pm \left( \frac{-1}{\sqrt{3}}, \frac{1}{\sqrt{3}}, \frac{1}{\sqrt{3}} \right)\]

16. Find the area of the parallelogram defined by the vectors \(\vec{a} = (1, -1, 0)\) and \(\vec{b} = (0, 1, 2)\).  

17. \(2\sqrt{6}\)

18. Find the area of the triangle defined by the vectors \(\vec{a} = (1, 2, 3)\) and \(\vec{b} = (3, 2, 1)\).  

19. Find the volume of the parallelepiped defined by the vectors \(\vec{a} = (0, 1, 1), \vec{b} = (0, 1, 0)\) and \(\vec{c} = (1, 0, 2)\).  

13. a) \((4, -3, -1)\)  
   b) \((-3, 3, -1)\)  
   c) \(1\)  
   d) \((4, 6, 6)\)  
   e) \(4\)  
   f) \((6, -1, 3, 9)\)  
   g) \(\frac{1}{12} (3, -2, 0)\)

14. \(\overrightarrow{c} = (1, 0, 2)\)

18. a) \(\vec{a} + \vec{b}\)  
   b) \(\vec{a} - 2\vec{b}\)  
   c) \(\vec{a} \cdot \vec{b}\)  
   d) \(\vec{b} \times \vec{c}\)  
   e) \((\vec{a} \times \vec{b}) \cdot \vec{c}\)  
   f) \((\vec{a} \times \vec{b}) \times \vec{c}\)  
   g) Proj(\(\vec{a}\) onto \(\vec{b}\))

1. Find the equation of a 2D line which a) passes through the points \(A(0, -2)\) and \(B(-3, 1)\)  
   b) passes through the point \(A(1, -3)\) and is parallel to the vector \(\vec{v} = (-2, -3)\)  
   c) passes through the point \(A(-2, 3)\) and is perpendicular to the vector \(\vec{v} = (3, -4)\)  
   d) passes through the point \(A(1, 1)\) and is parallel to the line \(y = 2 + 3x\)  
   e) passes through the point \(A(-2, -1)\) and is perpendicular to the line \(2x - 3y + 4 = 0\)

2. a) \(r = (1, 2) + t(2, 1)\) and \(\begin{cases} x = 2 - 3t \\ y = 1 - 2t \end{cases}\)  
   b) \(\frac{x - 1}{2} = \frac{y + 2}{4}\) and \(y = -2x\)  
   c) \(y = -3x + 1\) and \(6x + 2y - 3 = 0\)