Read each problem very carefully before starting to solve it. Each problem is worth 5 points. It is necessary to show all your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Find an equation for the line $\ell$ that passes trough the point $(-5,-2)$ and is perpendicular to the line with equation $3 y+x=17$. Then find the $y$-intercept of $\ell$.
2. Evaluate the following expressions:
(a) $\left(\frac{1}{81}\right)^{-3 / 4}=$
(b) $7 \cdot\left(\frac{49}{4}\right)^{-3 / 2}=$
