Questions

1. Express $z = -\sqrt{3} - i$ in polar form

2. Solve the following equations
   a) $\left(3^{2x}\right)\left(3^{x-2}\right) = 81$
   b) $(\log p)^2 = \log p^2$

3. Simplify $\dfrac{4\sqrt{3} + 3\sqrt{2}}{3\sqrt{2} - 2\sqrt{3}}$ in the form of $a + b\sqrt{c}$ where a, b and c are real numbers

4. Solve $\sqrt{x-2} + x = 8$

5. Find the solution set
   a) $|2x+1| \geq 3x - 4$
   b) $2|x-3| < |x+3|$

Final Answers:

1. $z = 2\left[\cos\left(-\dfrac{5\pi}{6}\right) + i\sin\left(-\dfrac{5\pi}{6}\right)\right]$
2. a) 2 b) $p = 1, 100$
3. $7 + 3\sqrt{6}$
4. 6
5. a) $(-\infty, 5]$ b) $(1, 1)$