LOGIC: TRUTH TABLES, LOGICAL EQUIV, DEMORGAN'S LAWS [PIRNOT 3.2]

EX 3.2.1: Construct a truth table for the logic statement: $\sim (P \wedge Q) \wedge (\sim P \vee Q)$

EX 3.2.2: Construct a truth table for the logic statement: $\sim (\sim P \vee R) \wedge (\sim R \vee Q)$

EX 3.2.3: Using truth tables, determine whether these two statements are logically equivalent: $P \wedge (\sim Q)$, $\sim (\sim P \vee Q)$

EX 3.2.4: Using truth tables, determine whether these two statements are logically equivalent: $\sim (P \vee Q)$, $(\sim P) \wedge Q$

EX 3.2.5: Using DeMorgan's Laws, completely simplify the following statement: $\sim [(\sim P) \wedge (Q \vee (\sim R))]$

EX 3.2.6: Using DeMorgan's Laws, negate the following English statement (in English): "Cats meow and dogs bark."
