60 steps with 17 possible decisions! Start true true false irstDie == secondDie && firstDie == thirdDie? reassign decision to 2 and decision Made to true false true true reassign decision to 1, chosenDie to 3, and decisionMade to true Yahtzee Selection Subprocess false true reassign decision to 1, chosenDie to 2, and decisionMade to true false false false true reassign decision to 1, chosenDie to 1, and decisionMade to true false Initialize and assign the variables least, middle, greatest, temp, and actualDie true variables true true Swap the middle and greatest variables true true true reassign decision to 3 and decisionMade to true. Then, --least and --middle false false --least and --middle changeTheChoseDie by calling unOrderDice() and finding the die that corresponds to the greatest value false true true reassign decision to 1 and decisionMade to true. false changeTheChoseDie by calling unOrderDice() and finding the die that corresponds to the least value true reassign decision to 1 and decisionMade to true. false --middle changeTheChoseDie by calling unOrderDice() and finding the true !decisionMade && least + 2 == greatest die that corresponds to the middle value false changeTheChoseDie by calling unOrderDice() and finding the die that corresponds to the least value true reassign decision to 1 and decisionMade to true. false true true true reassign decision to 1, decisionMade to true, and change theChosenDie to 1 false false true reassign decision to 1, decisionMade to true, and change theChosenDie to 2 false true reassign decision to 1, decisionMade to true, and change theChosenDie to 3 false reassign decision to 4 and decisionMade to true. true !decisionMade && numberOfRerolls < 3? changeTheChoseDie by calling unOrderDice() and finding the die that corresponds to the reassign decision to 1 and decisionMade to true Rolled if Needed true true reassign decision to 4 and decision Made to true false true false reassign decision to 2 and decisionMade to true Output and return the decision Stop

Process Outline for RobotMakesDecision Method

	Yahtzee	
1 1	displayReroll gameOver turnOver numberOfRerolls numberOfDice	
	1	
_	2	
	Player	
3 1	playerName score displayYahtzee displayStraight displayChance playersTurn dieChosenToReroll	
		displayReroll gameOver turnOver numberOfRerolls numberOfDice  1  2  Play  playerName score displayYahtzee displayStraight displayChance playersTurn

## Yahtzee

- displayReroll: booleangameOver: booleanturnOver: booleannumberOfRerolls: int
- + NUM\_DICE: int
- + getPlayersTurn(): boolean
- + startTurn(): void
  + displayDice(): void
- + displayOptions(): void
- + promptUser(scanner: Scanner): int
- + promptoser(scanner: Scanner): Int + pickDieToRoll(scanner: Scanner): int
- + robotMakesDecision(): int
- unOrderDice(secondDie: int, thirdDie: int, desiredDie: int): int
- + robotShowsChosenDie(): int
- + roll(die: int): void
- + rerollAllDlce(): void
- + scoreYahtzee(): void
- + scoreStraight(): void
- +scoreChance(): void
- + turnEnded(): boolean
- + robotsTurn(): void
- + displayScores(): void
- + isOver( curTurn: int): boolean

## Player

- score: int

displayYahtzee: booleandisplayStraight: booleandisplayChance: booleanplayersTurn: booleandieChosenToReroll: int

+ displayScore(): int

+ increaseScore(): void

+ getDisplayYahtzee(): boolean+ swapYahtzeeDisplay(): void+ getDisplayStraight(): boolean+ swapStraightDisplay(): void

+ getDisplayChance(): boolean+ swapChanceDisplay(): void+ getPlayersTurn(): boolean

+ swapPlayersTurn(): void

+ getChosenDie(): int

+ changeTheChosenDie(dieChosenToReroll: int): void

## Dice

- diceRoll: int
- + NUM\_SIDES\_OF\_DICE: int
- + Dice()
- + reroll(): void
- + roll(): int
- + getDiceRoll(): int

