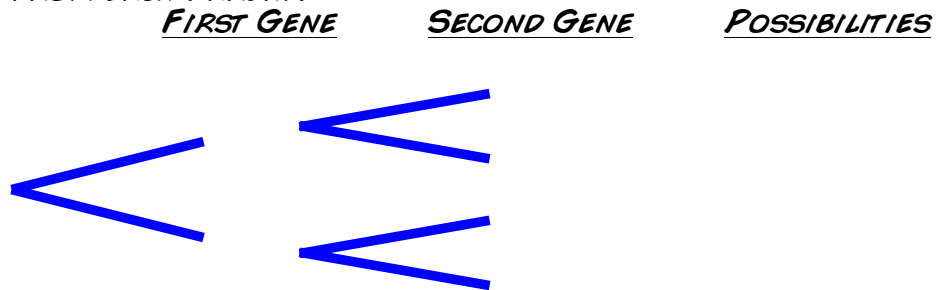


TWO INDEPENDENT GENES FOR SUPER-STRENGTH #1



IN THE STORY, WE SHOW HOW A PUNNETT SQUARE CAN BE USED TO CALCULATE THE LIKELIHOOD THAT A SUPER-STRONG PERSON LIKE WONDERGUY COULD BE BORN FROM TWO PARENTS, EACH WITH A RECESSIVE STRENGTH TRAIT. WITH TWO INDEPENDENT GENES TO BE CONSIDERED, HOW DOES THE PUNNETT SQUARE CHANGE?

SUPPOSE BOTH PARENTS CARRY THE RECESSIVE TRAIT IN BOTH GENES, $HhTt$.
STEP 1: USE A TREE DIAGRAM TO SEE WHAT DIFFERENT COMBINATIONS OF TRAITS ARE POSSIBLE FROM EACH PARENT.



STEP 2: PUT THE POSSIBLE COMBINATIONS OF TRAITS DOWN BOTH SIDES OF YOUR PUNNETT SQUARE, AND FILL IN THE MIDDLE FOR THE RESULTS.

THE PROBABILITY THAT THEIR OFFSPRING HAS SUPER-STRENGTH IS _____.

SUPER-TRICKY! WHAT IS THE PROBABILITY THAT THEIR OFFSPRING WILL NOT HAVE SUPER-STRENGTH, BUT CARRY AT LEAST ONE RECESSIVE GENE? WHAT IS THE PROBABILITY THAT THEIR OFFSPRING WILL NOT CARRY A RECESSIVE GENE? WHAT IS THE SUM OF THE PROBABILITIES?