

# Weekly Warm-Ups - January 22 - February 2

Name: \_\_\_\_\_

Core: \_\_\_\_\_

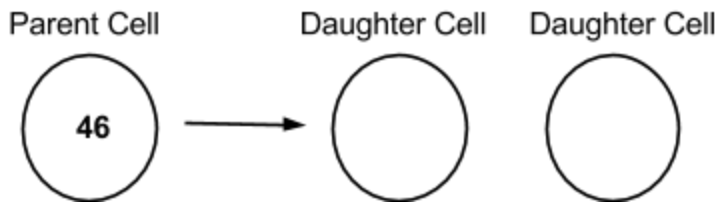
Answer the Daily Warm-Up Questions.

## Monday, 1/22

Why would the offspring resulting from fertilization have more differences than the offspring resulting from budding?

- Two parents provide all of their genes to their offspring during budding, unlike during fertilization.
- Each parent provides half of its genes to its offspring during budding, unlike during fertilization.
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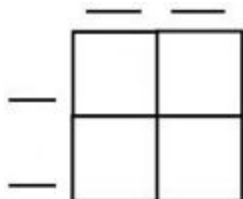
**Tuesday, 1/23** - A human body cell such as a skin cell has 46 chromosomes. Write in the blank circles how many chromosomes the new skin cells would have after the parent goes through mitosis.



## Wednesday, 1/24

Complete the Punnett square to answer the following questions.

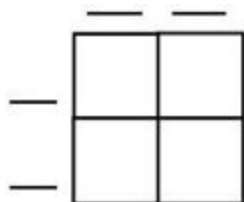
In a cross between two organisms heterozygous for the trait freckles, where having freckles is dominant, what would be the predicted ratio of the offspring's genotypes?



- 1 FF: 3 Ff: 1 ff
- 1 FF: 2 Ff: 1 ff
- 2 FF: 2 Ff
- 3 Ff: 1 ff

What will be the phenotypes of the offspring and the probability of each?

**Thursday, 1/25** - Snapdragons show incomplete dominance. A snapdragon plant with red flowers (RR) is crossed with a plant with white flowers (rr) and produces pink plants (Rr). Cross 2 of these pink offsprings.



What are the genotypes of the offspring and the probability of each?

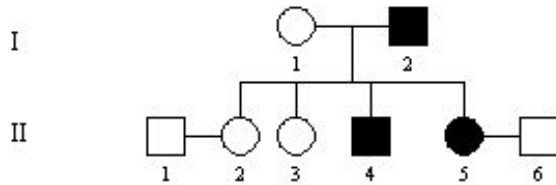
What are the phenotypes of the offspring and the probability of each?

**Friday, 1/26 -**

Hemophilia is a sex-linked recessive trait in humans. If a father and a son are both hemophiliacs, but the mother is normal, her genotype must be:

- A.  $X^hX^h$
- B.  $X^HX^h$
- C.  $X^HX^H$
- D.  $X^HY$

**Monday, 1/27**



- a. Individual  $I_1$  is heterozygous for the trait
- b. Any child of  $II_5$  and  $II_6$  will show the trait
- c. At least one parent of  $I_2$  has the trait
- d. Any child of  $II_1$  and  $II_2$  has a one in two chance of having the trait

**Tuesday, 1/30**

An organism's traits are largely determined by the genetic makeup of its parents. A mutation in which kinds of cells in a parent could cause a new trait to appear in the parent's offspring?

- A. Sperm or egg cells
- B. Nerve or muscle cells
- C. Muscle or brain cells
- D. Liver or lung cells

Why would a mutation in the other cell types NOT appear in the offspring?

**Wednesday, 1/31**

Match the following terminology.

- |                     |   |
|---------------------|---|
| ___ 1. Gene         | A. Genotype that has two of the same alleles for a trait.       |
| ___ 2. Allele       | B. Allele that can "hide" another trait.                        |
| ___ 3. Dominant     | C. A unit of heredity that determines a specific trait.         |
| ___ 4. Recessive    | D. The various forms of the same gene.                          |
| ___ 5. Heterozygous | E. Alleles that are only expressed when two copies are present. |
| ___ 6. Homozygous   | F. Genotype that has 2 different alleles for a trait.           |

**Thursday, 2/1**

What type of inheritance pattern would it be if a homozygous red flower and a homozygous blue flower cross and produce offspring that are both blue and red? \_\_\_\_\_  
Create a Punnett Square for this cross.

**Friday, 2/2**

Login Google Classroom to complete the Warm Up Quiz.

