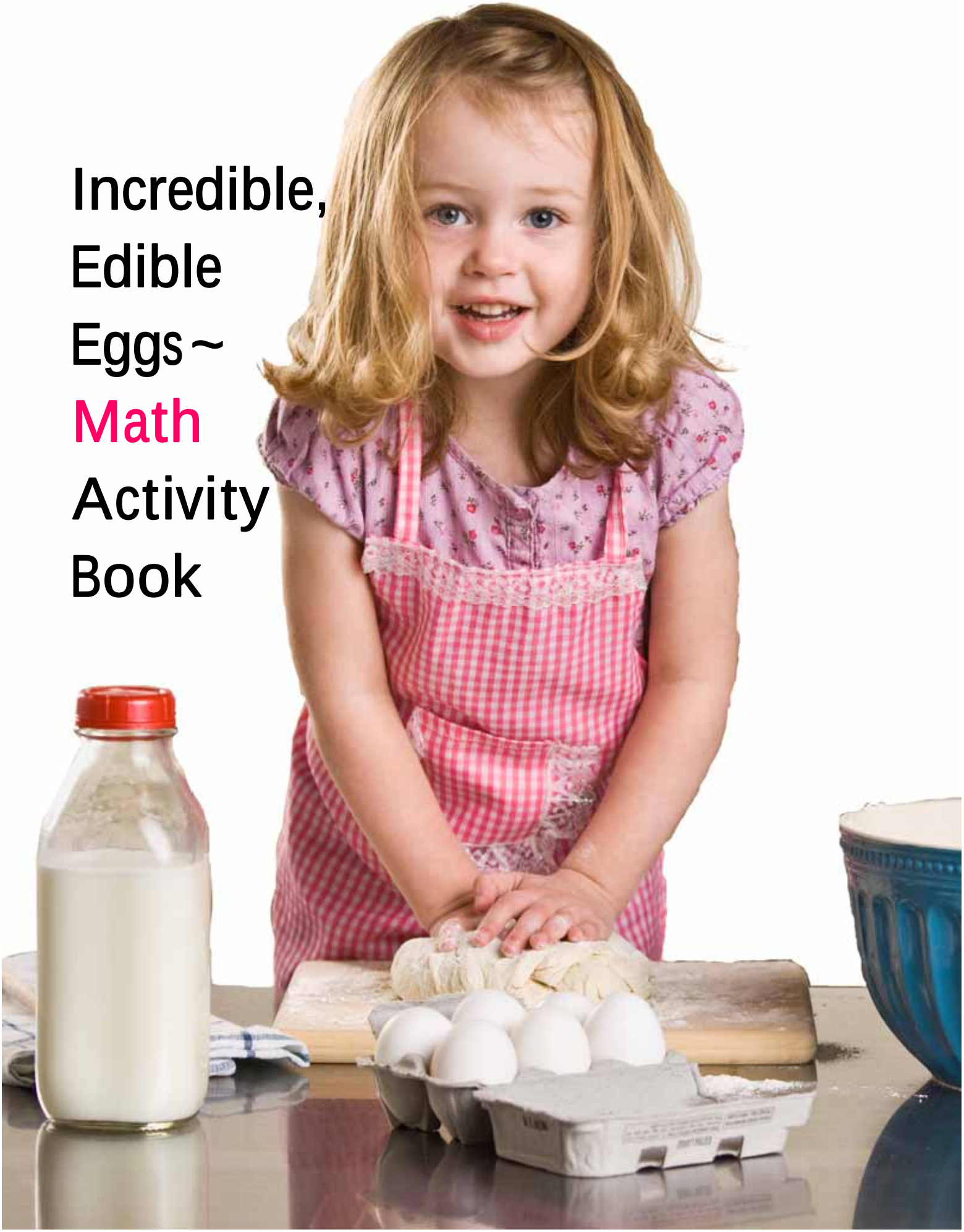
Incredible, Edible Eggs ~ Math Activity Book



This coloring book is produced by Colorado Egg Producers Association.
www.coloradoeggproducers.com

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A Commitment to the Best Possible Care Possible of Chickens Laying Eggs for Consumers

By signing this document you are committing to the **Colorado Egg Producers Association** that your Colorado egg farm, its principals and employees are using scientific principles in its production practices in producing a safe and wholesome product for consumers while providing best possible animal husbandry standards.

Acceptable animal husbandry standards are defined as striving to provide chickens:

Freedom from hunger and thirst – by ready access to fresh water and a diet to maintain full health and vigor.

Freedom from discomfort – by providing an appropriate environment including shelter and a comfortable resting area.

Freedom from pain, injury or disease – by prevention or rapid diagnosis and treatment.

Freedom to express normal behavior – by providing sufficient space, proper facilities and company of the animal's own kind.

Freedom from fear and distress – by ensuring conditions and treatment which avoid mental suffering.

- All chickens producing eggs in a modern production facility are provided the needed space to walk, sit down, stretch and extend their wings without physical discomfort.
- All chickens are provided shelter to provide protection from environmental stresses and predators. Production design must offer optimal daily care and monitoring of the individual chickens.
- All chickens have access to food and water at all times including molt period.
- Beak trimming, if performed, is done by only trained staff early in the chicken's life.
- Transportation and handling chickens is performed by trained staff in a manner that minimizes stress.
- Company has written Standard Operating Procedures (SOP) for emergency depopulation in the event of a disease outbreak or other disaster.
- Company has a written bio-security and animal health plan.
- Farm's animal husbandry procedures are documented and verified by an independent third party.
- All principals and employees have signed company's animal husbandry code of conduct affirming individual adherence to the instructions and guidelines for the best possible care of chickens laying eggs.

Let's learn about eggs.

Most of the eggs we eat, come from chickens.

Draw faces on these eggs.

How many of the chicken eggs are hatching?

_____

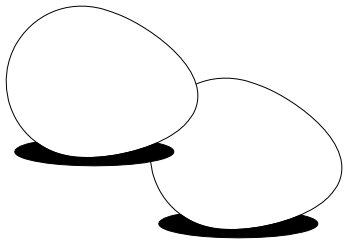
A female chicken is called a hen.
She lays eggs.

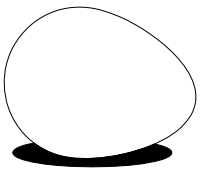
How many eggs are shown? Connect the number with the same number of eggs.

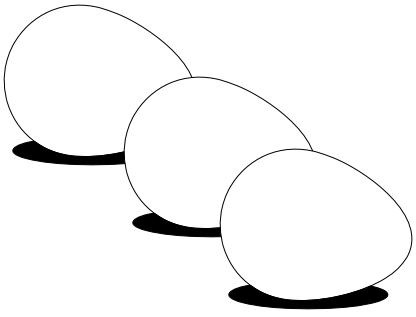
1

2

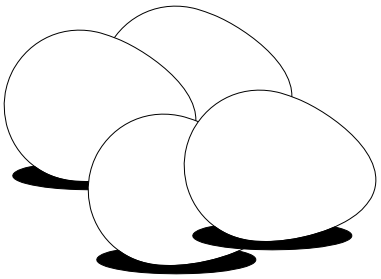
3







A male chicken is called a rooster. He does not lay eggs. He crows~ cocka-doodle-do.



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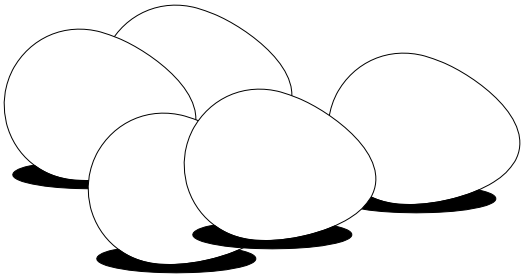

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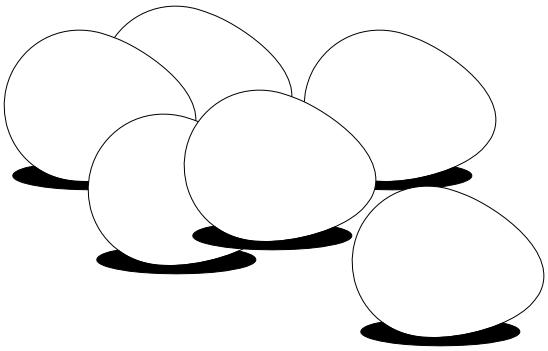
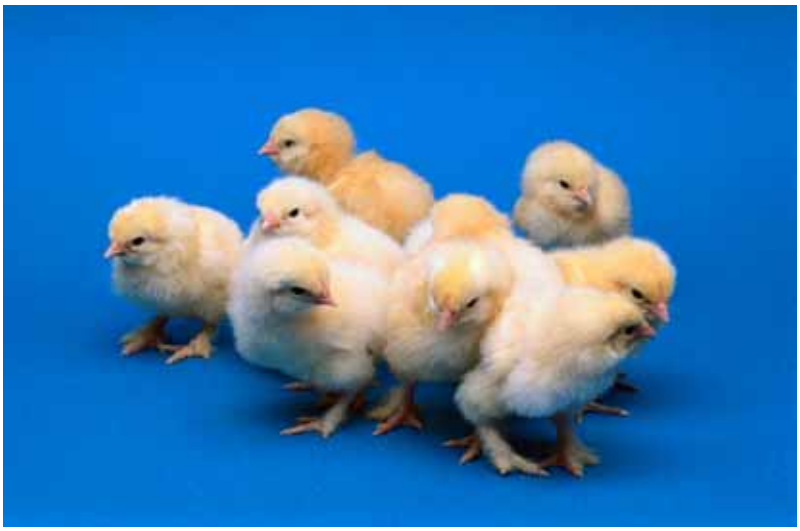
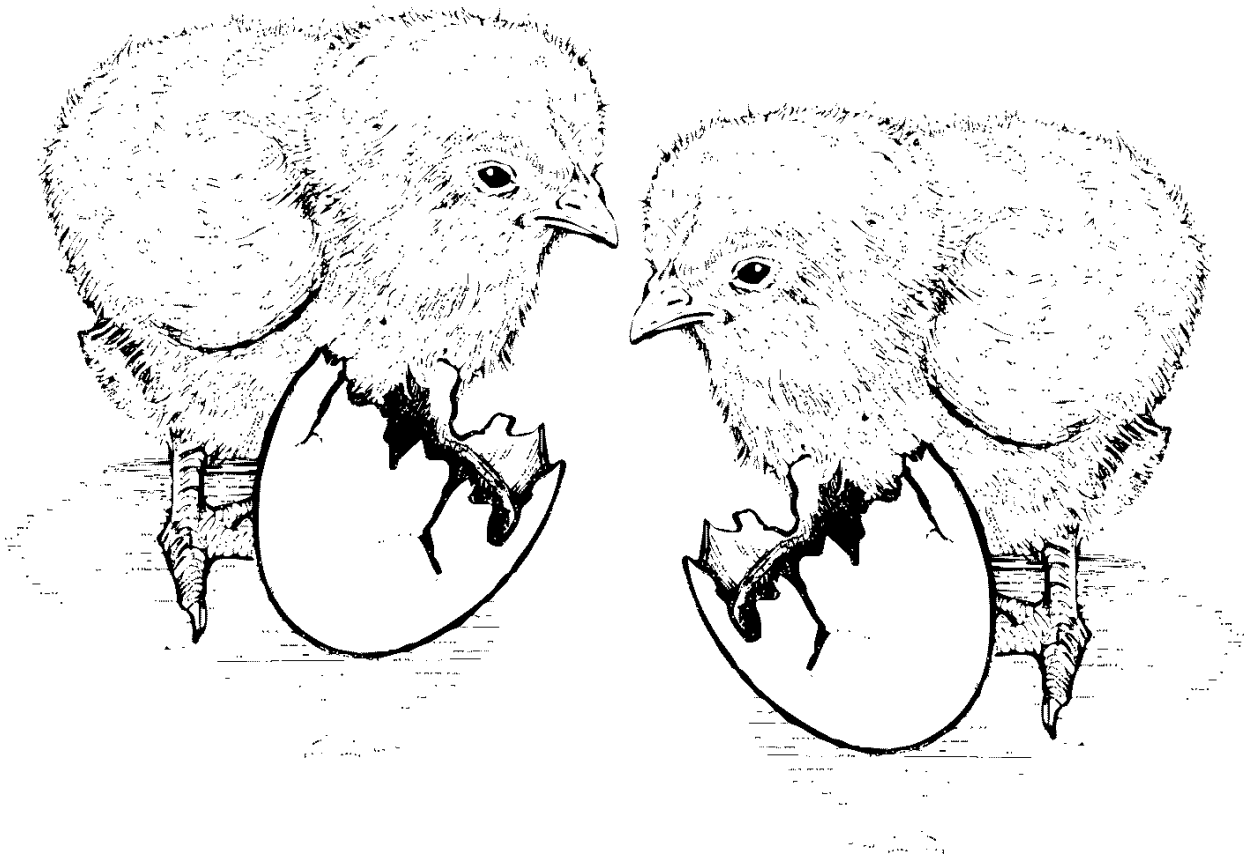


6

Chicks hatch from eggs.

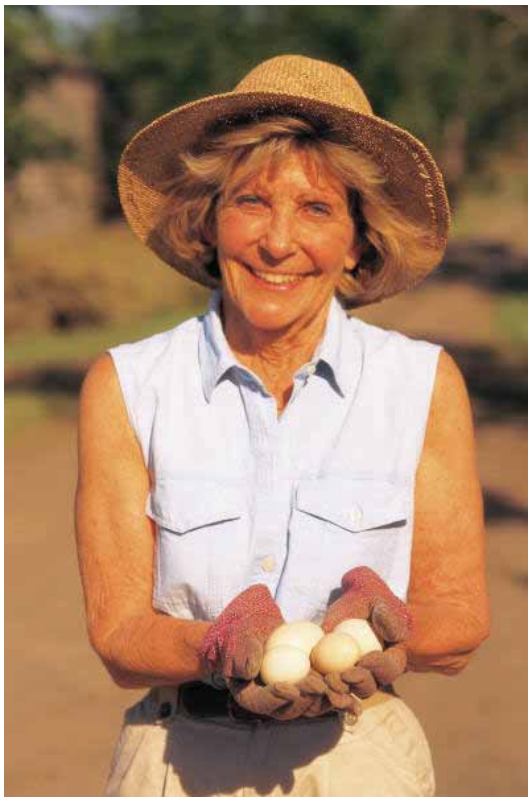


A baby chicken is called a chick or pullet.



How many chicks do you see in the drawing?

_____

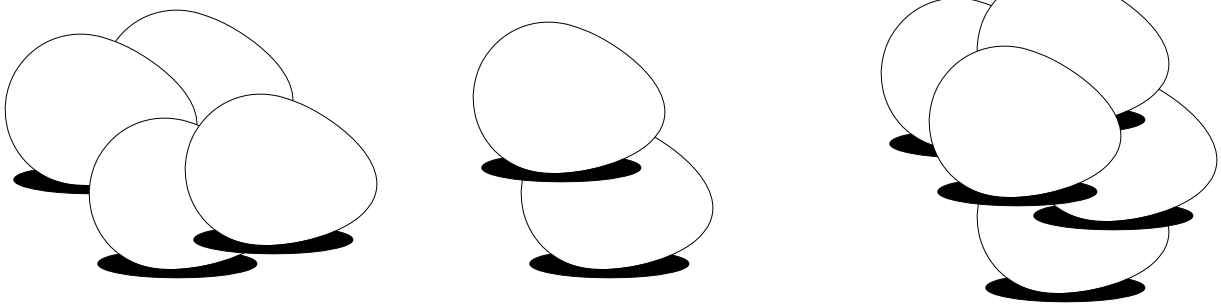


Farmers raise chickens
so we can have eggs.

Farmers start with chicks or
pullets.

Chicks hatch from eggs.

Draw a line between the eggs and number.

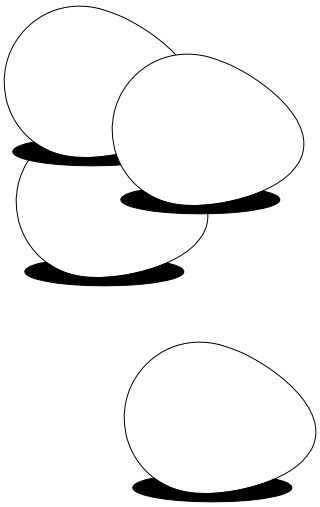


2 4 5

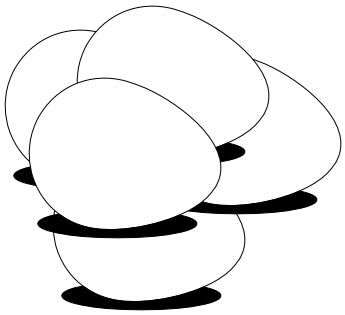
The chicks grow into hens.

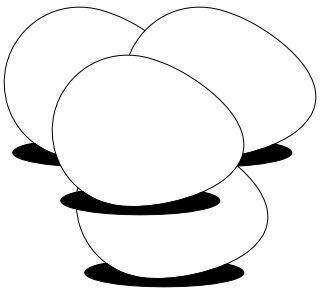
The hens lay the eggs we eat.

Chickens can be different colors. Most of the hens are white or brown.

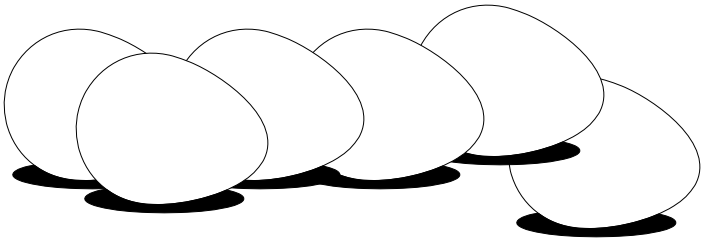


Draw a line between the eggs and number.





1 3 4 5 6



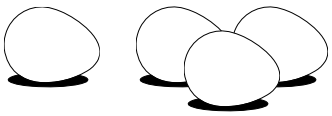
A group of hens is called a flock.

Farmers care for their hens.

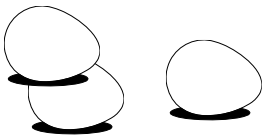
They provide the hens with food, water and a place to live.

They check on their hens to make sure they are healthy.

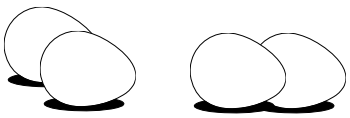
Add up the eggs.



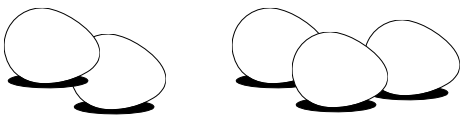
1 + 3 = _____



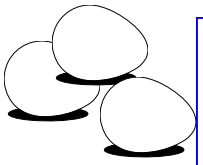
2 + 1 = _____



2 + 2 = _____

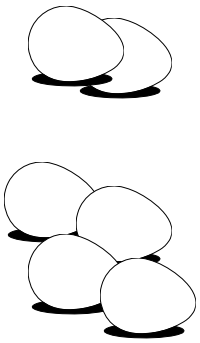


2 + 3 = _____



3
+ 3

2
+ 4



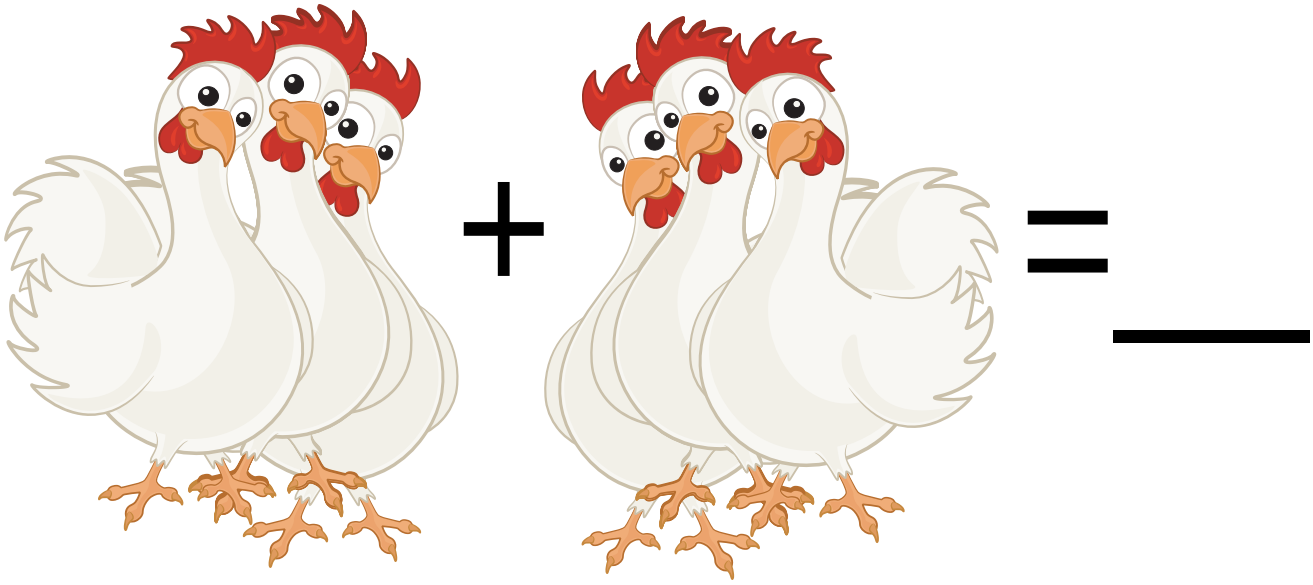
Hens live in barns. The barns protect them from animals that could hurt them. The barns keep them safe from predators, bad weather and diseases.

Count the orange barns. How many barns are on this farm?

_____

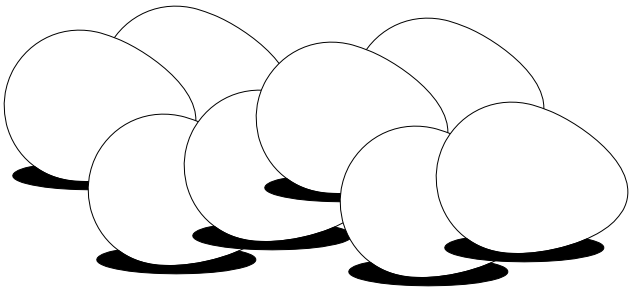
Some hens live in small groups in cages. Other hens live in large groups in barns.

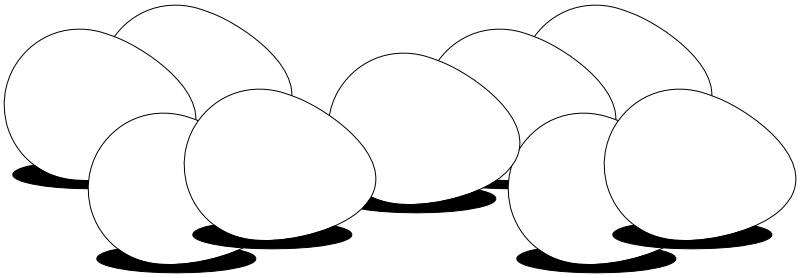
The hens below live together in a barn. How many hens live together?

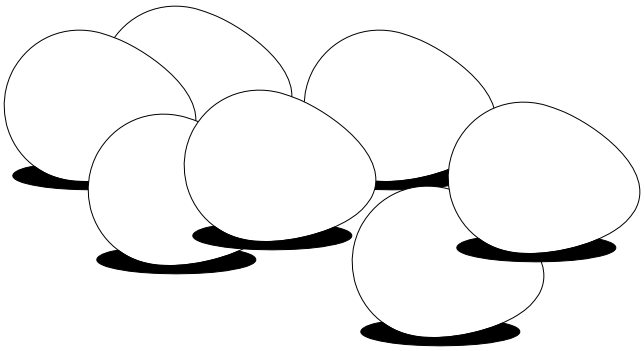


At the egg farm machines gather, wash and grade eggs.

Draw a line between the number and the same amount of eggs.







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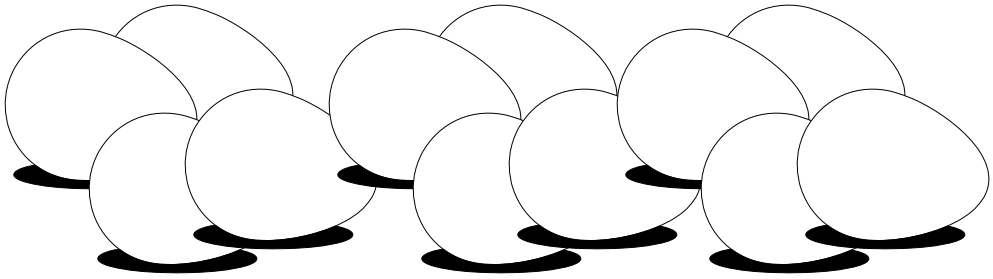
8

9

Eggs are removed that are cracked or dirty.

Never use a cracked egg!



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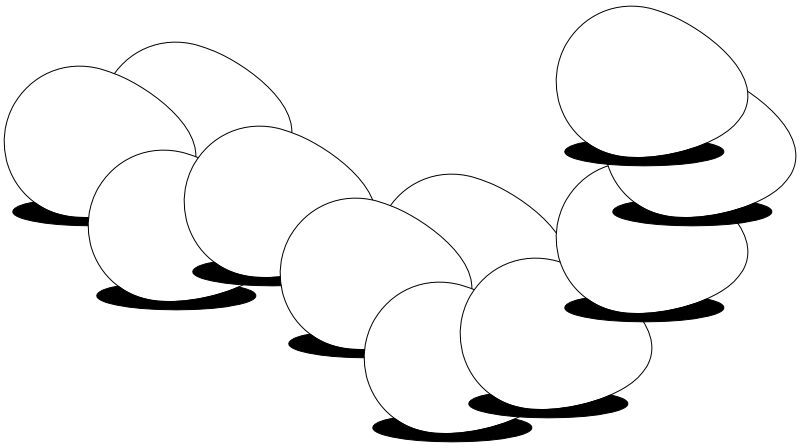
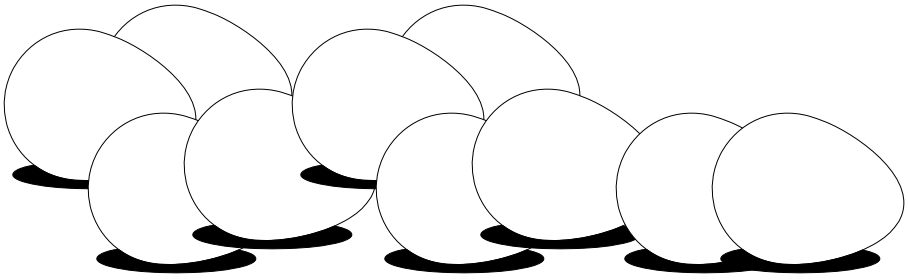
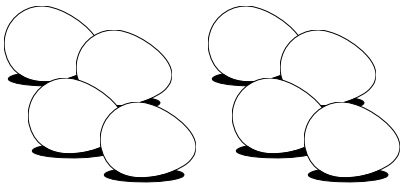


11

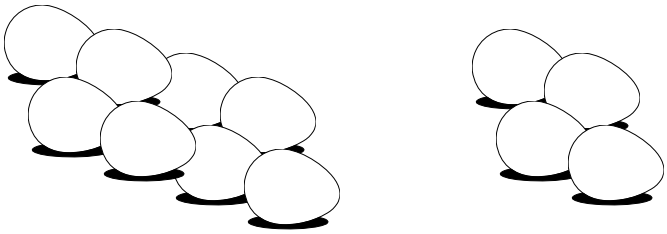
12



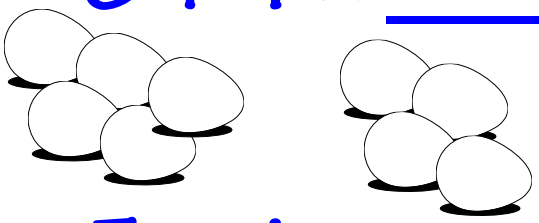
Eggs are sorted by size. Eggs are put in cartons by machines.



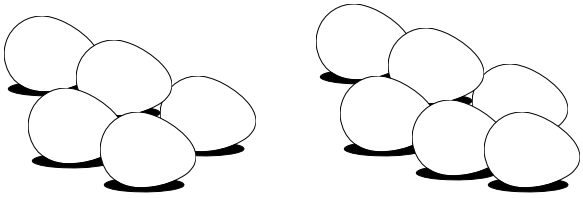
4 + 4 = _____



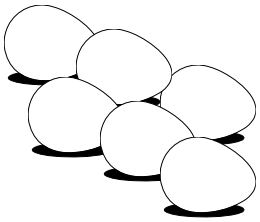
8 + 4 = _____

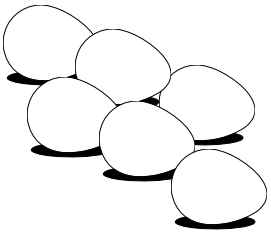


5 + 4 = _____



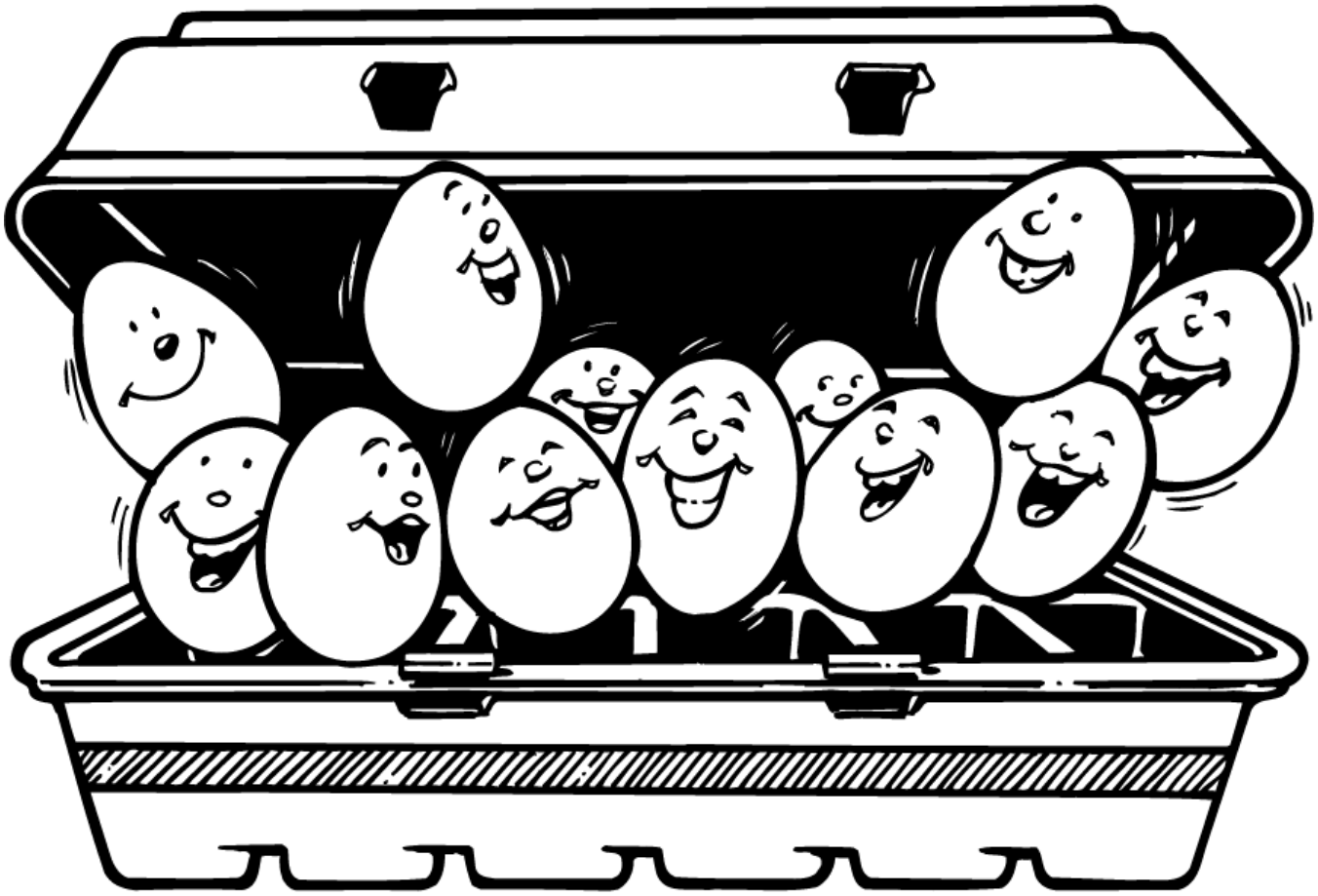
5 + 6 = _____





6

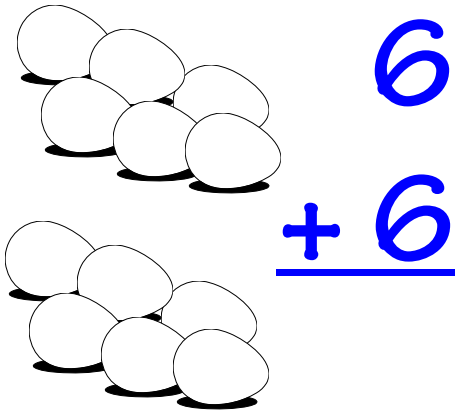
+ 6



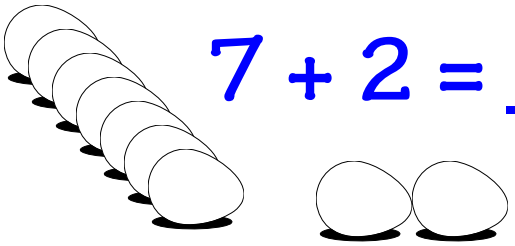
Eggs are often sold in cartons of one dozen. Count the eggs. How many eggs are in a dozen?

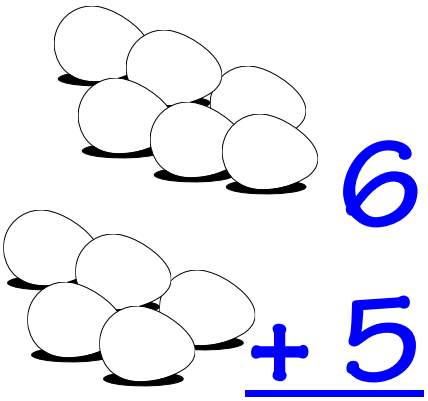
_____

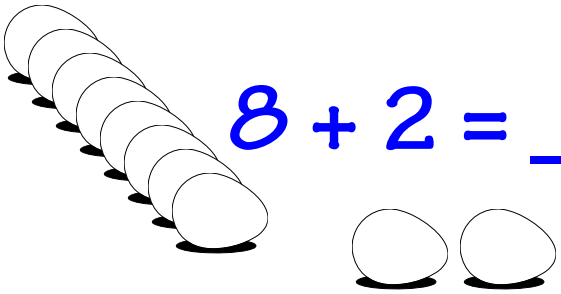
How many eggs would be in 1/2 dozen?

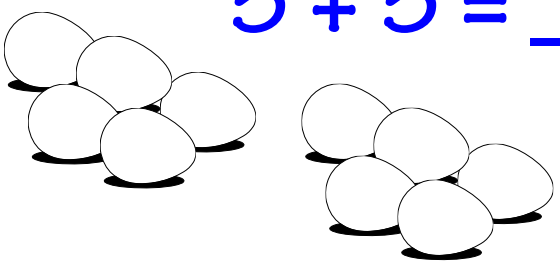


Eggs are looked at for quality.









A light is used to look inside the eggs. This is called candling.

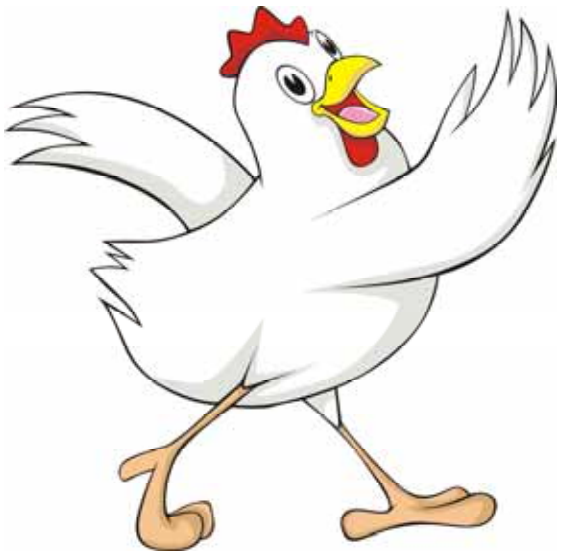
Cartons of eggs are put in boxes and put in large refrigerators called coolers to keep them fresh.

Rows go from left to right. How many boxes of eggs are in each row? _____

Columns go from top to bottom.

How many boxes of eggs are in each column?

_____



BONUS:

How many boxes of eggs do you see in the picture?

_____

Boxes of eggs are put in trucks and taken to stores. The stores sell the eggs. You can buy them and take them home to eat.

Some numbers are the same or equal to. The sign for equal to is **=**.

1 = 1 2 ____ 2 12 ____ 12 4 = _____

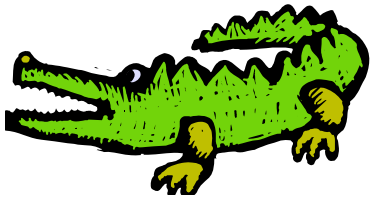
Some numbers are greater than or larger than other numbers. The sign for greater than is **>**.

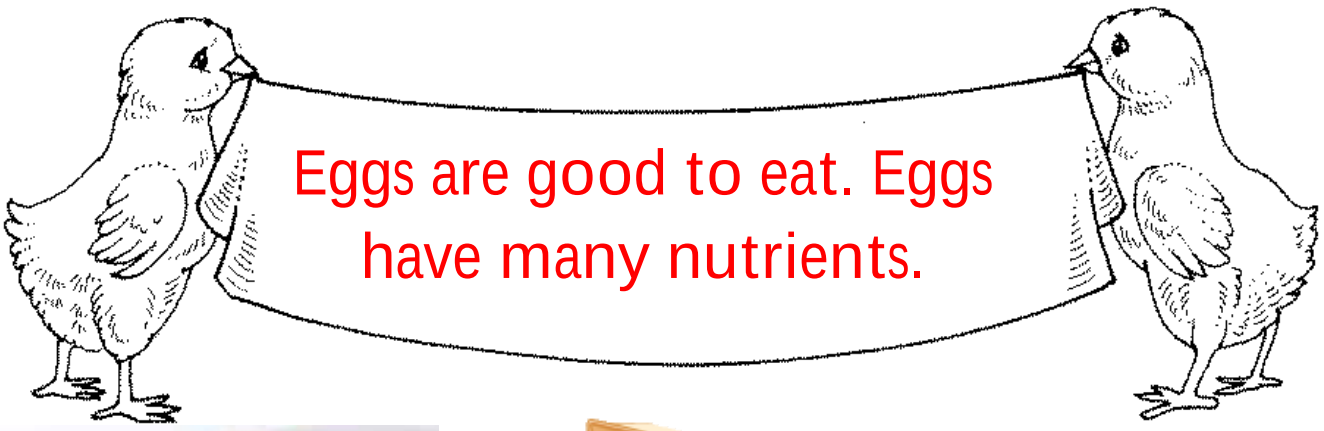
12 > 11 6 ___ 4 5 ____ 1 7 ____ 5

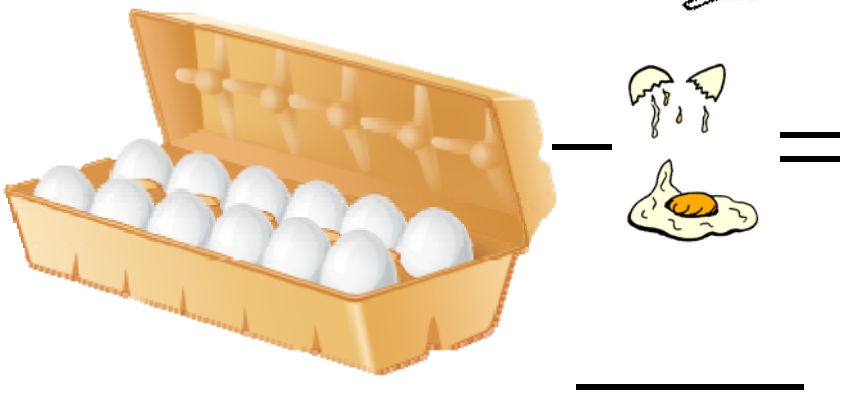
Some numbers are less than or smaller than other numbers. The sign for less than is **<.**

1 < 2 3 ___ 6 6 ____ 8 8 _____ 9

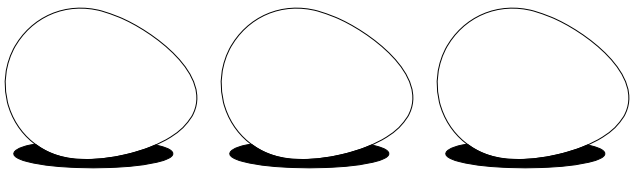
Think of > and < as an alligator that always wants to eat the largest number.





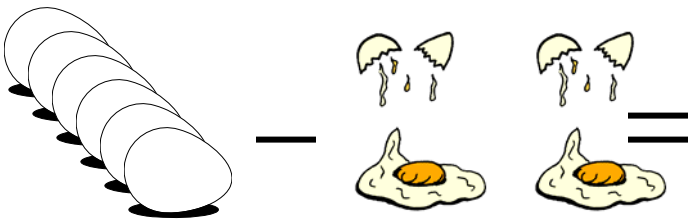


You start with a dozen eggs ~ remember a dozen is 12 eggs. You eat 1 for breakfast.
How many do you have left? _____



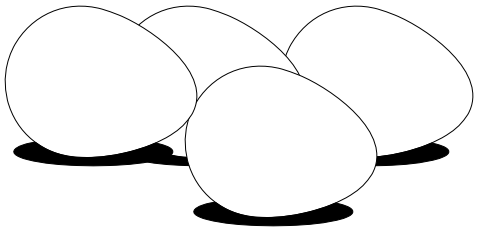
You hard boil 3 more for a salad. Now how many do you have left?

_____



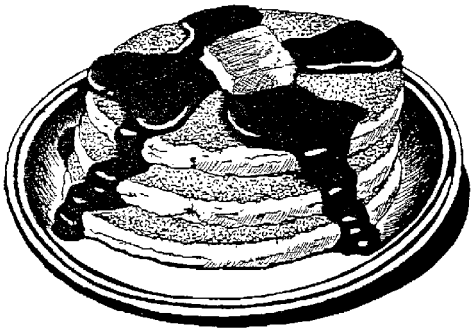
Here you have 6 eggs (half a dozen) and you eat 2 for breakfast.
Now how many do you have left?

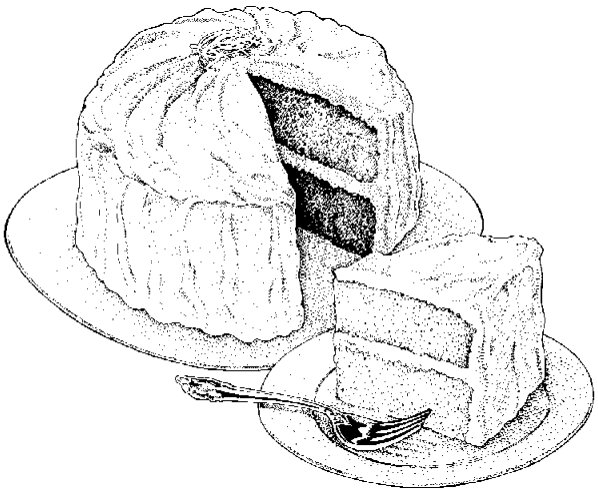
Eggs are used to make many other foods.



You have 4 eggs and you use 1 egg to make pancakes for breakfast. How many do you have left? Write the number of eggs you have left below.

_____

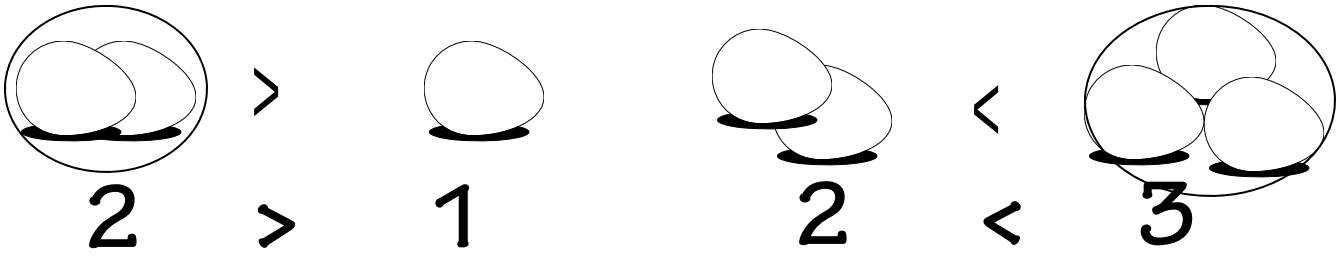




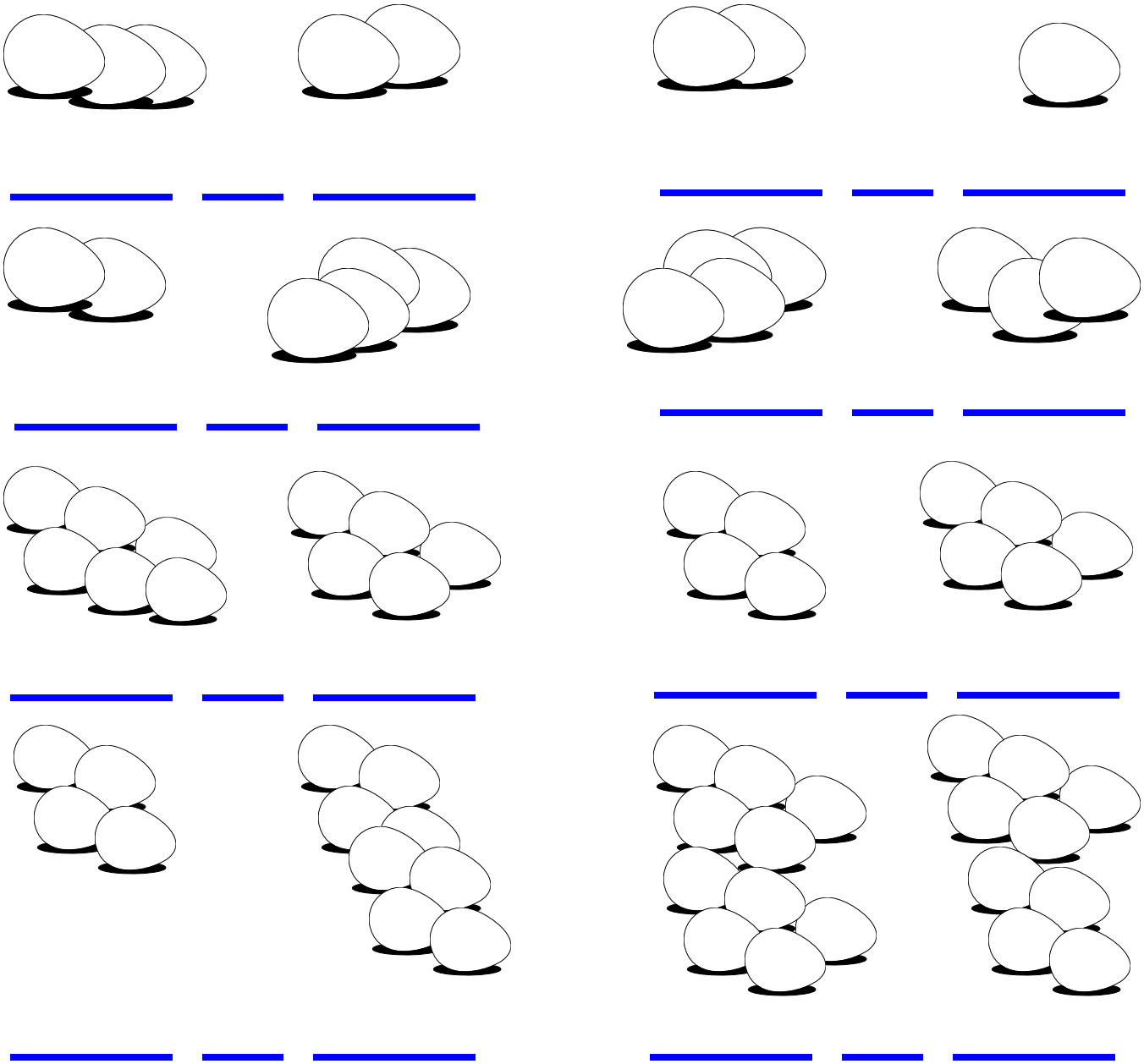
After breakfast you bake a cake that uses 2 more eggs. How many eggs do you have left now? Write the number of eggs you have left below.

_____

More than > Less than or Less than < More than



Circle the group with largest number of eggs. Fill in the numbers and sign for showing which group of eggs are more than or less than.



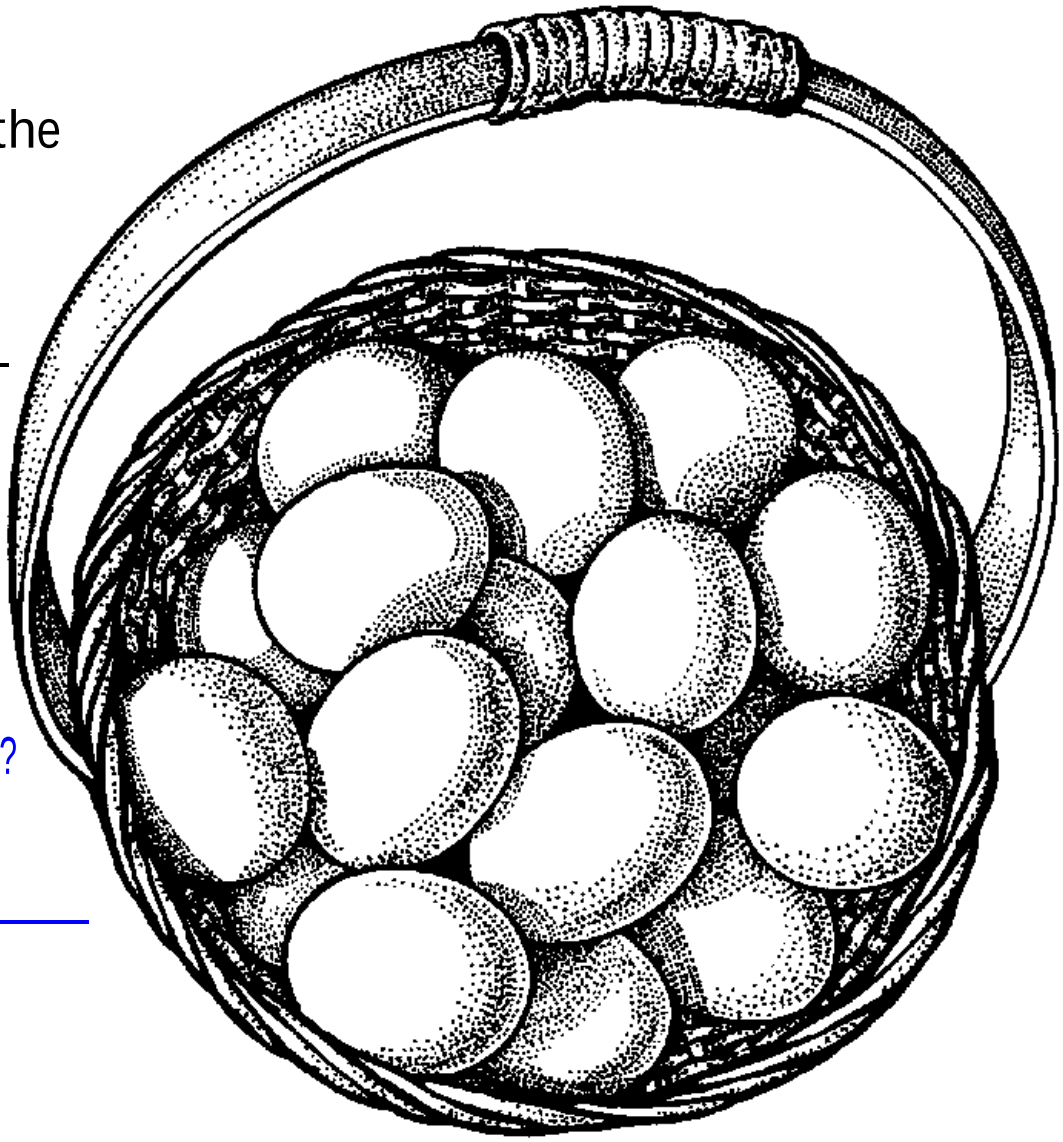
Eggs can be colored.
Try it.

How many colored eggs do you see in the picture?

_____

How many eggs are in the basket?

_____

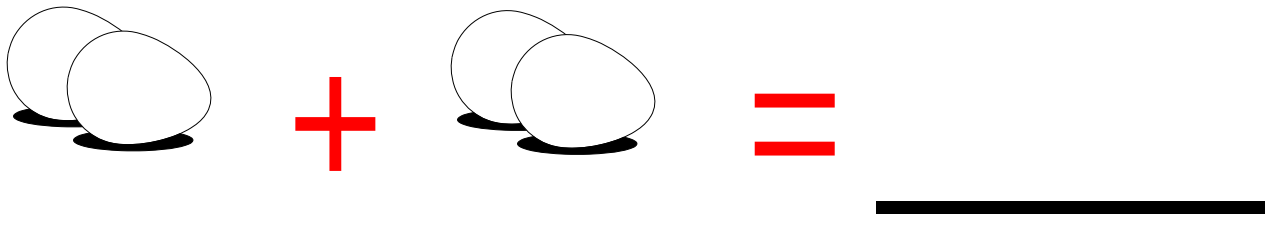


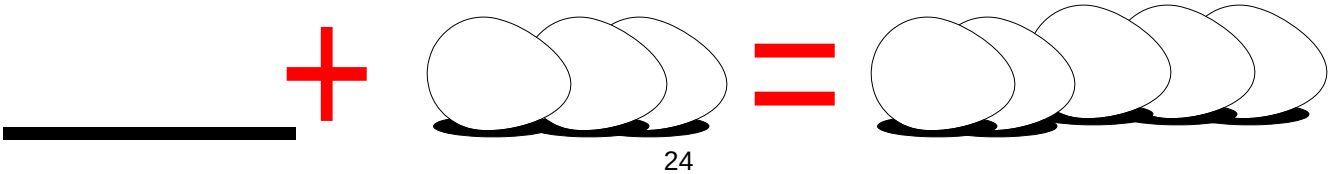
Which has more eggs, the basket or the bowl?

_____

When using eggs ~
wash hands,
use clean utensils and
refrigerate eggs.

We use the = sign when numbers are the same. We want the same number of eggs on both sides of the = sign. Draw in the eggs needed to make them equal.





Cook eggs thoroughly.

Add numbers to make both sides equal.

2 + 2 = 4

2 + 1 = ____

1 + ____ = 3

3 + ____ = 4

1 + 1 = ____

2 + 3 = ____

2 + ____ = 6

____ + 4 = 8

4 + 5 = ____

____ + 5 = 10

____ + 5 = 8

6 + 6 = ____

9 + ____ = 10

Use subtraction to make both sides equal.

____ - 2 = 3

8 - 8 = ____

10 - 1 = 9

10 - 2 = ____

10 - 2 = ____

6 - ____ = 2

9 - 1 = ____

____ - 3 = 7

6 - ____ = 3

Egg Facts:

The incredible edible egg is a nutrient dense food as it contains every major vitamin and mineral except vitamin C.

Eggs are a complete protein food because eggs have all nine of the essential amino acids (as well as all nine non-essential amino acids). Scientist used the egg as the standard by which all other protein foods are judged. On a scale with 100 representing highest efficiency, eggs surpass all other foods at 93.7.

Eggs are a very versatile food. They can be eaten alone and used in hundreds of recipes from baked goods to ice cream.

Eggs are inexpensive, averaging from $1 to $2 a pound depending upon how the hens are raise and what they are fed.

Egg farmers throughout Colorado pride themselves on providing eggs, a high quality, protein-dense food, to citizens in this great state. We are also proud to offer consumers the choice between cage and cage-free eggs.

As Colorado Egg Farmers, we care about how all of our chickens are treated. While no system is perfect, we ensure our chickens receive the best care possible within both the cage and cage-free systems.

Colorado Egg Farmers believe in proper stewardship to our communities and our chickens. We use scientific principles in our production practices to produce a safe and wholesome product for consumers while adhering to the best possible animal husbandry standards.

As an association, we were the first state to develop and implement an Animal Care Doctrine. Each of our producers and members have signed this Doctrine and are committed to the best possible care of chickens based on scientific principles and animal husbandry standards.

Producing more than a billion eggs every year, Colorado Egg Farmers rank 9th in state commodities and provide employment for more than 230 farm families.

Hens produce between 250 and 265 eggs per year. The average person consumes approximately 250 eggs per year . . . so one of our hens has your name on it and we take care of her so you will always have this affordable, high quality food!

No hormones or stimulants are ever used in commercial egg farming in the United States.

In processing, eggs are graded for interior and exterior quality. Grade AA is the highest quality, then Grade A and finally Grade B. The fresher the egg, the higher the grade. Eggs are inspected for cracks, dirt, internal and shell defects which will also affect the quality and ultimately the grade of an egg.

The size of the egg is based on the weight. A dozen large eggs must weigh at least 24 ounces. Younger hens often produce smaller eggs and as they age will begin laying larger eggs.

The surface of an egg shell has over 10,000 pores. Over time air transfers in and out of these tiny pores which will begin to cause the quality of the egg to decrease. We recommend buying refrigerated eggs with good dates to ensure the freshest eggs possible. Older eggs are best suited for hard-boiling as they are easier to peel due to increased levels of air trapped inside the shell. The smaller the “air cell” the fresher the egg; the larger the air cell the older the egg.

Eggs come in many varieties…white, brown, fertile, cage free, nutritionally enhanced, organic, free range and more. The color of the shell is determined by the breed of the hen. Generally a brown feathered hen with red earlobes will produce a brown egg and a white feathered hen with white earlobes will produce a white egg. There is no nutritional difference between a brown or white egg, however you can increase the nutritional content of an egg through altering the hen’s diet.

Most eggs sold in supermarkets today are from modern caged or conventional housing where the hen share space with about 5 to 6 other hens, have access the feed and water and can stretch their wings. Cage Free eggs come from hens free to roam, perch, scratch and nest inside a large barn with several thousand other hens. Organic eggs come from hens fed a strict diet made up of only organically grown feed ingredients. The hens live most of their day in a barn with many other hens but have some access to the outdoors. Free Range hens spend most of their time on pasture with little access to the indoors. Whatever system the hens are raised in requires care from properly trained personnel. No one system is perfect but offers the consumer a choice in the eggs he or she purchases.

Food safety and disease prevention is of major importance to the Colorado egg farmer as well. Vaccinations are routinely administered to flocks to protect against disease. Proper wash water , storage and transportation temperatures are monitored to ensure egg quality is never compromised.

Myth Buster:

Myth: Hens are kept in cages so small they can’t even spread their wings.
Fact: CEP standards are based upon science, third party verified and provide sufficient space requirements for each hen based on the breed. These science-based standards have increased the amount of space provided to each hen by nearly 30% in the last 10 years.

Myth: Egg producers put hormones in the hen feed.
Fact: Growth hormones are never fed to pullets being grown for egg-laying nor during the egg-laying period. The hens have a high quality, nutritionally balanced diet. The feed is meticulously formulated with the proper nutrients to produce quality eggs and is perfectly balanced with ingredients made up mostly of corn, soybean meal, vitamins and minerals.

Myth: Having so many hens in a closed facility will increase the risk of Avian Influenza.
Fact: Modern farming techniques help prevent the spread of avian influenza. Almost all eggs produced in the U.S. originate from farms with modern cage production systems in housing that protect the flock from contact with migratory birds, predators, and other diseases. Few visitors are allowed in poultry houses to reduce the risk of spreading diseases. Modern cage systems allow for daily inspection and monitoring of hens for diseases, and quick treatment.

Our Colorado egg facilities have extensive bio-security programs that include cleaning and disinfecting of housing and equipment between flock cycles and all transport equipment for moving birds in and out of the houses; careful planning to keep flocks protected from other domestic and wild birds; fully developed and monitored immunization programs to keep flocks healthy; and complete training of all employees concerning bio-security procedures.

Myth: Beak trimming is cruel.
Fact: CEP’s Code of Conduct recommends beak trimming only when necessary to prevent feather pecking and cannibalism and only when carried out by properly trained and monitored personnel. Some of the advantages of beak trimming include reduced pecking, reduced feather pulling, reduced cannibalism, better feather condition, less fearfulness, less nervousness, less chronic stress and decreased mortality.

Colorado Math Content Standards

First Grade	
1. Number Sense, Properties, and Operations	The whole number system describes place value relationships from ones to 100 and forms the foundation for efficient algorithms Adding and subtracting involve composing and decomposing using a variety of strategies Parts of objects can be shown as fractions
2. Patterns, Functions, and Algebraic Structures	Patterns can grow Number relationships can be used to solve problems
3. Data Analysis, Statistics, and Probability	Visual displays of data can be created using individual student data
4. Shape, Dimension, and Geometric Relationships	Shapes can be created and described by composing and decomposing Measurement is used to compare and order objects and events
Kindergarten	
1. Number Sense, Properties, and Operations	Whole numbers can be used to name, count, represent, and order quantity Adding and subtracting to 10 involves composing and decomposing using a variety of strategies and representations
2. Patterns, Functions, and Algebraic Structures	Patterns can repeat Relationships exist between numbers
3. Data Analysis, Statistics, and Probability	Visual displays of information can used to answer questions
4. Shape, Dimension, and Geometric Relationships	Shapes are described by their characteristics and position Measurement is used to compare and order objects
Preschool	
1. Number Sense, Properties, and Operations	Quantities can be represented and counted Counting is a means for solving problems
2. Patterns, Functions, and Algebraic Structures	Objects can be sorted based on patterns and relationships
3. Data Analysis, Statistics, and Probability	Information and objects can be sorted
4. Shape, Dimension, and Geometric Relationships	Shapes can be observed in the world and described in relation to one another Measurement is used to compare objects

www.coloradoeggproducers.com