

# Beef Up Your Math!

**Beef Up Your Addition**

**Beef Up Your Subtraction**

**Beef Up Your Multiplication**

**Beef Up Your Division**

**Beef Up Your Fractions & Decimals**

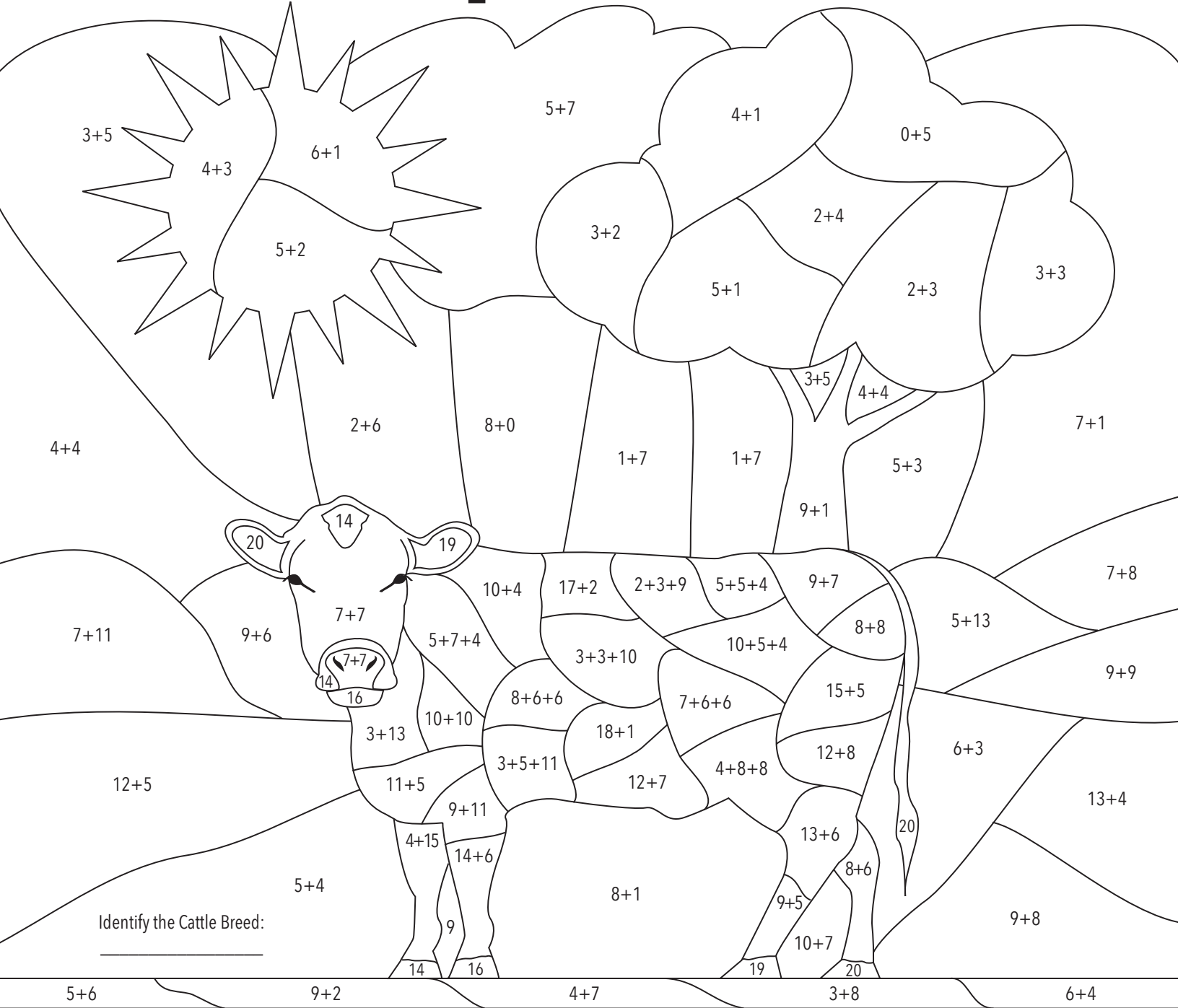
Please share extra resources with teachers from other grade levels.

Project developed by:



**For additional resources, visit  
[LearnAboutAg.org/resources/learn\\_beef](http://LearnAboutAg.org/resources/learn_beef)**

# Beef Up Your Addition



Identify the Cattle Breed:

\_\_\_\_\_

Answer: Angus

## INSTRUCTIONS

Solve the math problems, then using the key, color the picture. Identify the Cattle Breed you colored by reading the California Cattle Breed Facts.

- Yellow = 7
- Light Blue = 8
- Light Green = 5, 6, 9, or 17
- Reddish-Brown = 13
- Dark Green = 15 or 18
- Pink = 3
- White = 12
- Black = 14, 16, 19, or 20
- Brown = 10 or 11
- Tan = 4

## CALIFORNIA CATTLE BREED FACTS

**ANGUS** cattle originated in Scotland and can be solid black or red. Angus cattle are polled, meaning they don't have horns.

**HEREFORD** cattle originated in England and are reddish-brown with all white faces. They also have white on their chest, belly, and legs. Hereford cattle have horns. Polled Hereford cattle do not.

**CHAROLAIS** cattle originated in France and are white or light tan in color. Charolais have horns, so are dehorned at a young age.

**SIMMENTAL** cattle originated in Switzerland and are usually reddish-brown with some white markings. Simmental cattle are among the oldest and most widely distributed breeds in the world.

**GELBIEH** cattle originated in Bavaria, in Southern Germany. Gelbvieh cattle are reddish-brown and were not introduced into the U.S. until the 1970's.

# Beef Up Your Addition

*Think Like a Cattle Rancher!*

**A**

**B**

**Pen #1**



Cattle need water. How much they need depends on their size, the temperature outside, and if they are producing milk. Seventeen cows drink water. Fifteen more cows drink water. How many cows drink water in all?

**Pen #3**



Male cattle used for breeding are called bulls; female cattle that have given birth (calved) are called cows, and young cattle (under 1 year) are called calves. A rancher has two bulls, sixteen cows, and fourteen calves. How many cattle does the rancher have altogether?

**Pen #2**



Cattle seek shelter from the weather when it is cold in the winter or hot in the summer. This could include a barn, an overhead shelter, or trees. Thirty-two cows are in the barn. A rancher brings in twenty-eight more. How many cows are in the barn?

**Pasture #1**



Ranchers must keep careful records about their animals. Rancher Susan has 23 cows. The first year, she adds 21 new calves to her herd. The second year, she adds 36. How many total animals does Susan have now?

**Pasture #2**



Transportation is an important part of cattle ranching. Nearly all cattle are transported several times in their lives. One bull is transported 35 miles, 22 miles, and then 96 miles. How many miles does the bull travel in all?

**D**

**C**

Answers: Pen#1: 32 cows; Pen#2: 60 cows; Pen#3: 32 cattle; Pasture#1: 80 animals; Pasture#2: 153 miles. Use a ruler: Side AB: 6.5", Side BC: 7.5", Side CD: 6.5", Side DA: 7.5", Total Perimeter: 28"

*Use a ruler!*

Measure and record the perimeter of your pens and pastures using inches.

Side AB: \_\_\_\_\_ Side BC: \_\_\_\_\_

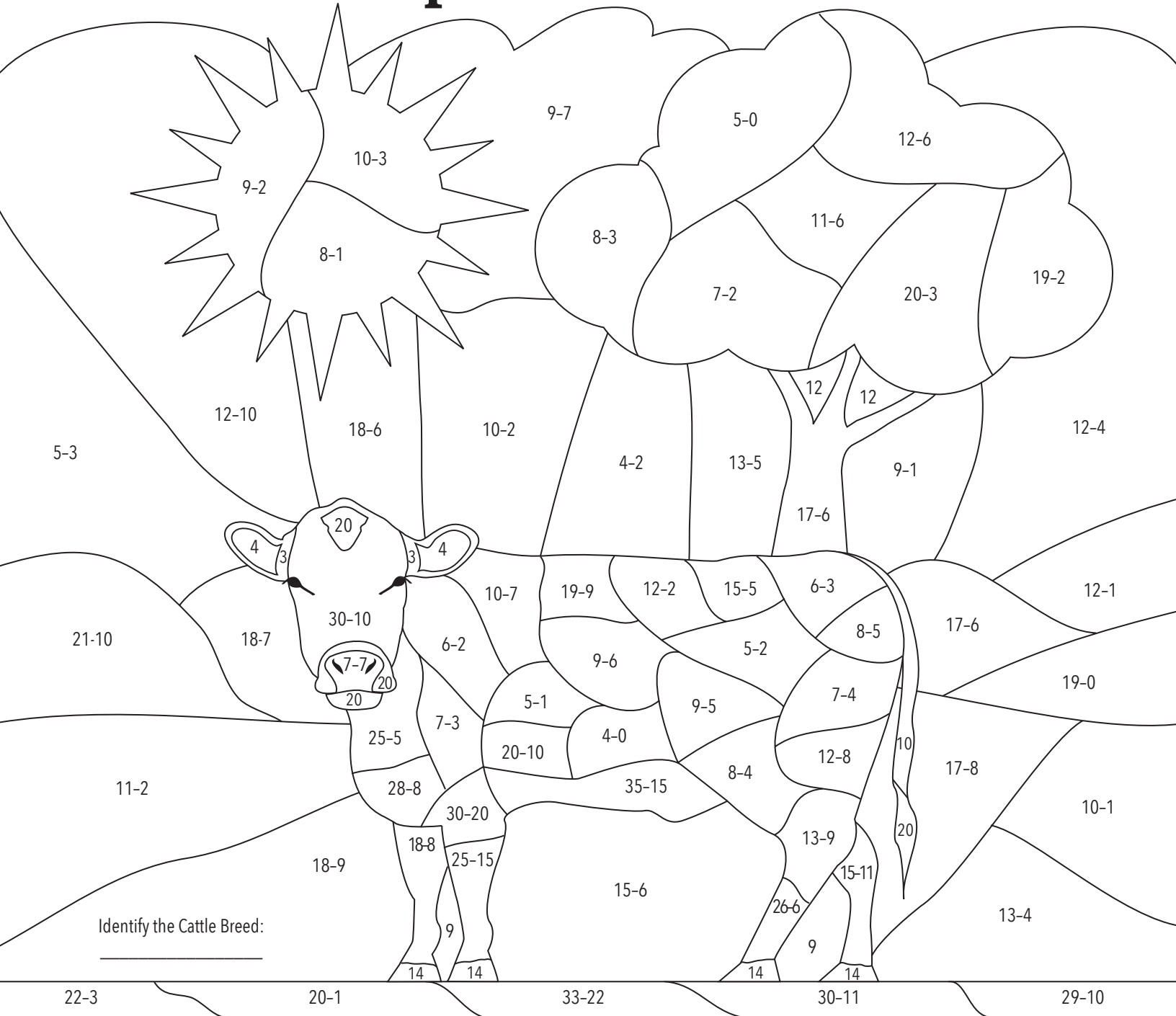
Side CD: \_\_\_\_\_ Side DA: \_\_\_\_\_

Total perimeter: \_\_\_\_\_ (add all sides)

**California Standards**

- CCSS Math: 1.OA.1, 3, 6; 2.OA.1, 2; 2.NBT.5; 2.MD.1, 5
- Visual Arts Content: 1-2, 5,0

# Beef Up Your Subtraction



Identify the Cattle Breed:

\_\_\_\_\_

Answer: Polled Hereford

## INSTRUCTIONS

Solve the math problems, then using the key, color the picture. Identify the Cattle Breed you colored by reading the California Cattle Breed Facts.

- Yellow = 7
- Light Blue = 2, 8, 12
- Light Green = 5, 6, 9, or 17
- Reddish-Brown = 3, 4, 10, 13
- Dark Green = 18
- Pink = 0
- White = 20
- Black = 15
- Brown = 11 or 19
- Gray = 14

## CALIFORNIA CATTLE BREED FACTS

**ANGUS** cattle originated in Scotland and can be solid black or red. Angus cattle are polled, meaning they don't have horns.

**HEREFORD** cattle originated in England and are reddish-brown with all white faces. They also have white on their chest, belly, and legs. Hereford cattle have horns. Polled Hereford cattle do not.

**CHAROLAIS** cattle originated in France and are white or light tan in color. Charolais have horns, so are dehorned at a young age.

**SIMMENTAL** cattle originated in Switzerland and are usually reddish-brown with some white markings. Simmental cattle are among the oldest and most widely distributed breeds in the world.

**GELBIVIEH** cattle originated in Bavaria, in Southern Germany. Gelbvieh cattle are reddish-brown and were not introduced into the U.S. until the 1970's.

# Beef Up Your Subtraction

*Think Like a Cattle Rancher!*

<p><b>A</b></p> <p><b>Pen #1</b>  Cows stay with their calves until they are weaned between 6 to 8 months of age. There were 8 cows and 8 calves in the pen; 4 calves were moved to another pen for weaning. How many cows and calves are left in the pen?</p>	<p><b>B</b></p> <p><b>Pen #3</b>  Safe and proper fencing are important for all farm animals. If a fence isn't tall enough, is broken, or a gate left open, animals can escape. Twenty-two cows were in a pen; eight jumped over a broken fence. How many cows are left in the pen?</p>
<p><b>Pen #2</b>  Ranchers often bring their cattle in for health checks. Once the cattle have been checked, they are taken back out to pasture. There were 18 cattle in a pen, then 12 were moved out to pasture. How many cattle are left in the pen?</p>	
<p><b>Pasture #1</b> </p> <p>Once cattle weigh approximately 1,200 to 1,400 pounds, they are sent to market. A rancher has two steers that are ready for market. Steer A weighs 1,265 pounds. Steer B weighs 1,398 pounds. How many more pounds does steer B weigh than steer A?</p>	
<p style="text-align: center;"><b>Pasture #2</b> </p> <p style="text-align: center;">A steer weighs 967 pounds. How many more pounds does it have to gain before it can go to market?</p>	
<p><b>D</b></p>	<p><b>C</b></p>

Answers: Pen#1: 12 cows (8) & calves (4); Pen#2: 6 cattle; Pen#3: 14 cows; Pasture#1: 133 lbs.; Pasture#2: 233 lbs.; Use a ruler: Pasture#1: 17.75" Pasture#2: 17.75" Fence line: 28"

*Use a ruler!*

Measure and record the perimeter of your pastures using inches.

Pasture 1: \_\_\_\_\_ Pasture 2: \_\_\_\_\_

You are the rancher and need to replace your fences. Find the combined total "fence line" or perimeter of the pastures. Hint: you will only count a shared fence one time. Total fence line perimeter:

\_\_\_\_\_

**California Standards**

- CCSS Math: 1.OA.1, 3, 6; 2.OA.1, 2; 2.NBT.5; 2.MD.1, 5; 3.OA.8; 3.MD.4, 8; 4.NBT.4; 4.MD.2
- Visual Arts Content: 1-4, 5.0



# Beef Up Your Multiplication

*Think Like a Cattle Rancher!*

**A**
**B**

**Pen #1** If you have three pens of five cows, how many cows do you have altogether?

**Pen #3** There are two barns each with 20 cattle and two pastures with 50 cattle each. How many cattle is that altogether?

**Pen #2** Four trucks each haul 30 cattle to auction. How many cattle is that altogether?

**Pasture #1** A cattle rancher is repairing a barbed-wire fence. The fence has three strands of wire.

(a) How much wire does he need to repair a 132-foot length of fence?

(b) If each roll of barbed-wire costs \$26.00 and the rancher needs to buy three rolls, what will be the total cost to repair the fence?

**Pasture #2** In the beef cattle diet, common roughages include hay, silage, and grass. Each day, cattle typically eat 24 pounds of average-quality hay per animal. (a) How many pounds of hay would 180 animals eat in one day? (b) How many pounds would these same animals eat in one week? (c) How many pounds of hay would they eat in a year?

Bonus: How many tons? (1 ton = 2,000 pounds)

**D**
**C**

Answers: Pen#1: 15 cows, Pen#2: 120 cattle, Pen#3: 140 cattle, Pasture#1: (a) 396 feet, (b) \$78, Pasture#2: (a) 4,320 lbs./day, (b) 30,240 lbs./week, (c) 1,572,480 lbs./year, bonus: 786.24 tons. Use a ruler: Length & Width: Pen #1: 3.25" x 1.75" Pen #2: 3.25" x 1.75" Pen #3: 3.25" x 3.75" Pastures 1 & 2 combined: 6.5" x 3.75" Area: Pen #1: 5.69 in<sup>2</sup> Pen #2: 6.50 in<sup>2</sup> Pen #3: 12.19 in<sup>2</sup> Combined Pastures: 24.38 in<sup>2</sup> Challenge: 12.19 in<sup>2</sup>

**Use a ruler!**

Measure and record the length and width of each pen and the combined pastures. After you find the length and width, find the areas. Round to the nearest hundredth.

Length & Width: Pen #1 \_\_\_\_\_ Pen #2 \_\_\_\_\_ Pen #3 \_\_\_\_\_ Pastures 1 & 2 combined \_\_\_\_\_

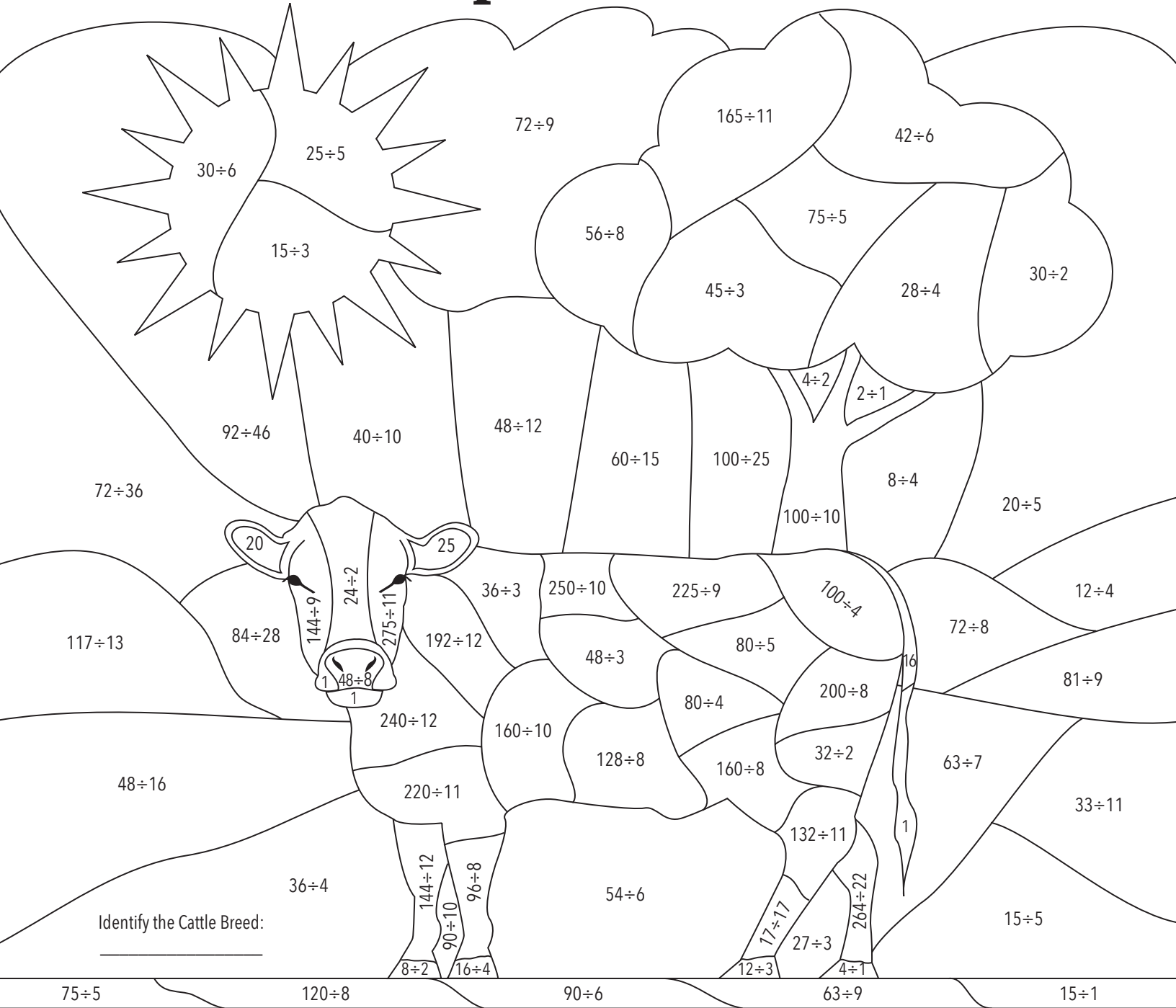
Area: Pen #1 \_\_\_\_\_ Pen #2 \_\_\_\_\_ Pen #3 \_\_\_\_\_ Pastures 1 & 2 combined \_\_\_\_\_

Challenge: What would the area of one pasture be? \_\_\_\_\_

**California Standards**

- CCSS Math: 3.OA.1, 3, 5, 7; 3.MD.4, 8; 4.OA.3; 4.NBT.5; 4.MD.3; 5.NBT.5, 6, 7; 6.NS.3; 6.G.1
- Visual Arts Content: 1-6, 5.0

# Beef Up Your Division



Identify the Cattle Breed:

\_\_\_\_\_

Answer: Simmental

## INSTRUCTIONS

Solve the math problems, then using the key, color the picture. Identify the Cattle Breed you colored by reading the California Cattle Breed Facts.

Orange = 5

Light Blue = 8

Light Green = 3, 9

Reddish-Brown = 16, 20, 25

Dark Green = 7, 15

Pink = 6

White = 1, 12

Black = 14

Brown = 10

Gray = 2, 4

## CALIFORNIA CATTLE BREED FACTS

**ANGUS** cattle originated in Scotland and can be solid black or red. Angus cattle are polled, meaning they don't have horns.

**HEREFORD** cattle originated in England and are reddish-brown with all white faces. They also have white on their chest, belly, and legs. Hereford cattle have horns. Polled Hereford cattle do not.

**CHAROLAIS** cattle originated in France and are white or light tan in color. Charolais have horns, so are dehorned at a young age.

**SIMMENTAL** cattle originated in Switzerland and are usually reddish-brown with some white markings. Simmental cattle are among the oldest and most widely distributed breeds in the world.

**GELBIVIEH** cattle originated in Bavaria, in Southern Germany. Gelbvieh cattle are reddish-brown and were not introduced into the U.S. until the 1970's.



# Beef Up Your Division

*Think Like a Cattle Rancher!*

**A**

**B**

**Pen #1** 

A rancher has 125 cattle to divide up into 5 pens. How many cattle will be in each pen?

**Pen #3** 

A cow will drink nearly 2 gallons per 100 pounds of weight when the weather is hot. If the average cow weighs 1,000 pounds, how much water will a cow need? If a rancher has a 1,000-gallon water trough for his herd, how many cows will be able to drink? How many gallons would he need for a herd of 15 cattle?

**Pen #2** 

A rancher has 100 hay bales. A cow needs 5 hay bales per week. How many weeks would 100 hay bales last one cow? If he has a herd of 10 cattle, how many weeks will the bales last?

**Pasture #1** 

Ranchers keep one bull for breeding approximately 30 cows. If a rancher has 240 cows, how many bulls does he or she need?

**Pasture #2** 

Just like humans, cattle need vitamins too. Vitamin A is important for vision, reproduction, and a healthy immune system. If a bottle of Vitamin A supplement contains 250 ml (milliliters), and each animal needs 6 ml, how many animals can be treated with a bottle containing 250 ml? If you have a herd of 200 cows, how many bottles of Vitamin A supplement will you need?

**D**

**C**

Use a ruler: Length & Width of Combined Pens: 6.5" x 3.75" Area of Pens: 24.38 in<sup>2</sup> Length & Width: Halved Pens: 3.25" x 1.88 in<sup>2</sup> Doubled Pens: 13" x 7.5" Area: Halved Pens: 6.11 in<sup>2</sup> Doubled Pens: 97.5 in<sup>2</sup> Answers: Pen #1: 25 cattle; Pen #2: 20 weeks; 2 weeks; 2 weeks; Pen #3: 20 gallons; 50 cows; 300 gallons; Pasture #1: 8 bulls; Pasture #2: 41.6 rounds to 41 cattle; 5 bottles.

**Use a ruler!**

Measure and record the length and width of the combined pens in inches. Calculate the area. If you were to halve the length and width of the pens, how would that change the area? What if you doubled the length and width of the pens? Round all calculations to the nearest hundredth. Challenge: On another page, create a scale drawing of the pens either halved or doubled. Label and show all measurements.

Length & Width of Combined Pens: \_\_\_\_\_ Area of Pens: \_\_\_\_\_

Length & Width: Halved Pens \_\_\_\_\_ Doubled Pens \_\_\_\_\_

Area: Halved Pens \_\_\_\_\_ Doubled Pens \_\_\_\_\_

**California Standards**

- CCSS Math: 3.OA.2, 3, 7; 3.NBT.1, 10; 3.MD.8; 4.OA.3; 4.NBT.3, 6; 4.MD.3; 5.NBT.4, 5, 6; 5.MD.1; 6.NS.2; 6.G.1
- Visual Arts Content: 1-6, 5.0



# Beef Up Your Fractions & Decimals

Identify the Cattle Breed:  
\_\_\_\_\_

Answer: Gelbvieh

## INSTRUCTIONS

Solve the math problems, then using the key, color the picture. Identify the Cattle Breed you colored by reading the California Cattle Breed Facts.

Orange = .5

Light Blue = .4

Light Green = .66, .875

Reddish-Brown = .2, .6, .8

Dark Green = .1, .25

Pink = .7

White = .12

Black = .9

Brown = .33

Tan = .75

## CALIFORNIA CATTLE BREED FACTS

**ANGUS** cattle originated in Scotland and can be solid black or red. Angus cattle are polled, meaning they don't have horns.

**HEREFORD** cattle originated in England and are reddish-brown with all white faces. They also have white on their chest, belly, and legs. Hereford cattle have horns. Polled Hereford cattle do not.

**CHAROLAIS** cattle originated in France and are white or light tan in color. Charolais have horns, so are dehorned at a young age.

**SIMMENTAL** cattle originated in Switzerland and are usually reddish-brown with some white markings. Simmental cattle are among the oldest and most widely distributed breeds in the world.

**GELBVIEH** cattle originated in Bavaria, in Southern Germany. Gelbvieh cattle are reddish-brown and were not introduced into the U.S. until the 1970's.

