10/10

Name: Shelby Carlson

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	½
2	4	1/4
3	8	1/8
4	16	1/16
5	32	1/32
6	64	1/64
10	1024	1/1024

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   Time it's set by 2 each time the stage increases by 1

   b. Write a function that models the number of pieces of yarn at stage x.

   c. Use the function to find the number of pieces of yarn at stage 10.

   1024 Stage 1/1024

2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   Because each time the number increase the fraction increase decrease.

   b. Write a function that models the length of each new piece of yarn at stage x.

   It's a variable HAHA.

   c. Use the function to find the length of each new piece of yarn at stage 10.

   1/1024

10/10

Name: Ashley Gates 3-13-12 1st hour

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	1/2
2	4	1/4
3	8	1/8
4	16	1/16
5	32	1/32
6	64	1/64
x		

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   function 2nd colum times by 2 1st colum increases by 1

   b. Write a function that models the number of pieces of yarn at stage x.

   64 1/64

   c. Use the function to find the number of pieces of yarn at stage 10.

   1,024 1/1024

2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   Because the number increases the fraction decreases

   b. Write a function that models the length of each new piece of yarn at stage x.

   c. Use the function to find the length of each new piece of yarn at stage 10.

10/10

Name: Mariafelicia Minson

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	1/2
2	4	1/4
3	8	1/8
4	16	1/16
5	32	1/32
6	64	1/64
7	128	1/128
8	256	1/256
9	512	1/512
10	1024	1/1024

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

Yes, Because each time the stage increases by one the number of pieces multiplies by 2

   b. Write a function that models the number of pieces of yarn at stage x.

   c. Use the function to find the number of pieces of yarn at stage 10.

1024

2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

each time the stage increases, the fractions gets smaller

   b. Write a function that models the length of each new piece of yarn at stage x.

Variable = anything else

   c. Use the function to find the length of each new piece of yarn at stage 10.

1/1024 For Fractions

7/10

Name: Hamdi H

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	½
2	4	¼
3	8	⅛
4	16	1/16
5	32	1/32
X		

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   Yes

   b. Write a function that models the number of pieces of yarn at stage x.
   The number of pieces is adding up by 2 but the stage goes by ones

   c. Use the function to find the number of pieces of yarn at stage 10.

2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   b. Write a function that models the length of each new piece of yarn at stage x.

   c. Use the function to find the length of each new piece of yarn at stage 10.

10/10

3/13/12

Name: Lova yang Hr. 1

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	1/2
2	4	1/4
3	8	1/8
4	16	1/16
5	32	1/32
x	64	1/64x

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   Yes, it goes by 2, Even

   b. Write a function that models the number of pieces of yarn at stage x.

   1/64x

   c. Use the function to find the number of pieces of yarn at stage 10.

   1/1,024

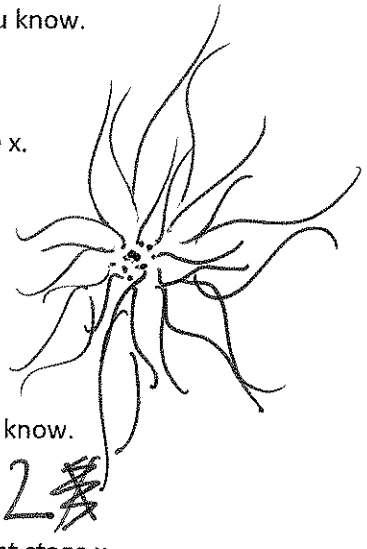
2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   increases. Times by 2

   b. Write a function that models the length of each new piece of yarn at stage x.

   1/64x

   c. Use the function to find the length of each new piece of yarn at stage 10.



10/16

Name: Stacey G 3-13-12 1st hr.

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	½
2	4	1/4
3	8	1/8
4	16	1/16
5	32	1/32
x	64	1/64

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   Yes because whatever stage it, its that number to the power of 2
   b. Write a function that models the number of pieces of yarn at stage x.
   Column one doubles in column 2
   c. Use the function to find the number of pieces of yarn at stage 10.
   use the number in column 1 and double it in column 2
2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   Yes because you just put it to the power of 2
   b. Write a function that models the length of each new piece of yarn at stage x.
   it doubles the number
   c. Use the function to find the length of each new piece of yarn at stage 10.
   we would Solve 10^2

10/10

Name Brannea Mansfield

3/4/16 1st

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	½
2	4	1/4
3	8	1/8
4	16	1/16
5	32	1/32
X		

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   (Yes) cause what ever the stage is that number is the power of 2
   b. Write a function that models the number of pieces of yarn at stage x.
   x column 1 and column 2
   c. Use the function to find the number of pieces of yarn at stage 10.
   use the number in column 1 and column 2 is just double
2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   is always the exponential and over a point.
   b. Write a function that models the length of each new piece of yarn at stage x.
   Yes cause you just put a long 0 and could put a decimal
   c. Use the function to find the length of each new piece of yarn at stage 10.
   just double, + and add some

7/10

Name: Deja Morgan

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	½
2	4	¼
3	8	1/8
4	16	1/16
5	32	1/32
X		

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   Exponential function.

   b. Write a function that models the number of pieces of yarn at stage x.
   It's timeing the # by 2 each time.

   c. Use the function to find the number of pieces of yarn at stage 10.

2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   b. Write a function that models the length of each new piece of yarn at stage x.

   c. Use the function to find the length of each new piece of yarn at stage 10.

7/10

Name: Nate Gracy

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage C	Number of Pieces P	Length of each new piece L
1	2	$\frac{1}{2}$
2	4	$\frac{1}{4}$
3	8	$\frac{1}{8}$
4	16	$\frac{1}{16}$
5	32	$\frac{1}{32}$
x		

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   Yes because it doubles
   b. Write a function that models the number of pieces of yarn at stage x.
   $C = P(2)^x$
   c. Use the function to find the number of pieces of yarn at stage 10.

2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   b. Write a function that models the length of each new piece of yarn at stage x.
   c. Use the function to find the length of each new piece of yarn at stage 10.

8/10

Name: Alex. Gamez 3/13/12 1st hour

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	½
2	4	1/4
3	8	1/8
4	16	1/16
5	32	1/32
X	64	1/64

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   Yes, Because they times itself by two.

   b. Write a function that models the number of pieces of yarn at stage x.

   c. Use the function to find the number of pieces of yarn at stage 10.
   1,024

2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   b. Write a function that models the length of each new piece of yarn at stage x.
   Each time the function rises the fraction is down

   c. Use the function to find the length of each new piece of yarn at stage 10.

10/10

Name: Labraun Wade.

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	½
2	4	¼
3	8	⅛
4	16	1/16
5	32	1/32

$\frac{1}{1} \cdot 2 = \frac{1}{2}$

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   Yes because it increases by double everytime

   b. Write a function that models the number of pieces of yarn at stage x.

   2^x

   c. Use the function to find the number of pieces of yarn at stage 10.

   $2^{10} = 1,024$

2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   No because it's becoming smaller instead of doubling.

   b. Write a function that models the length of each new piece of yarn at stage x.

   $\frac{1}{2}^x$

   c. Use the function to find the length of each new piece of yarn at stage 10.

   $\frac{1}{2}^{10} = 9.76$

10/10

Name: Cristina Gomez

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	½
2	4	1/4
3	8	1/8
4	16	1/16
5	32	1/32

$\frac{1}{1} \cdot 2 = \frac{1}{2}$

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   Its multiplying the same thing all the time
   b. Write a function that models the number of pieces of yarn at stage x.
   2^x
   c. Use the function to find the number of pieces of yarn at stage 10.
   $2^{10} = 1,024$
2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   NO, because the length of yarn is getting smaller
   b. Write a function that models the length of each new piece of yarn at stage x.
   $1/2^x$
   c. Use the function to find the length of each new piece of yarn at stage 10.
   $1/2^{10} = 9.76$

10/10

Name: [illegible]

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	½
2	4	¼
3	8	⅛
4	16	1/16
5	32	1/32

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   Yes I guess because they were doubling

   b. Write a function that models the number of pieces of yarn at stage x.

   2^x

   c. Use the function to find the number of pieces of yarn at stage 10.

   2^{10}

2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   Yes they were doubling the denominator

   b. Write a function that models the length of each new piece of yarn at stage x.

   $\frac{1}{2}^x$

   c. Use the function to find the length of each new piece of yarn at stage 10.

   $\frac{1}{2}^{10} = 9.76$

10/10

Name: Alyssa Smith 5th

Cutting Yarn Activity

3/13/12

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2 $\cdot 2$	$\frac{1}{2}$ $\cdot \frac{1}{2}$
2	4 $\cdot 2$	$\frac{1}{4}$ $\cdot \frac{1}{2}$
3	8 $\cdot 2$	$\frac{1}{8}$ $\cdot \frac{1}{2}$
4	16 $\cdot 2$	$\frac{1}{16}$ $\cdot \frac{1}{2}$
5	32	$\frac{1}{32}$

$\frac{1}{1} \cdot 2 = \frac{1}{2}$

6	64
7	128
8	256
9	512
10	1024

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   Yes Because it's multiplying by the same thing all the time
   b. Write a function that models the number of pieces of yarn at stage x.
   2^x
   c. Use the function to find the number of pieces of yarn at stage 10.
   $2^{10} = 1024$
2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   Yes because It's still multiplying by the same number
   b. Write a function that models the length of each new piece of yarn at stage x.
   $\frac{1}{2}^x$
   c. Use the function to find the length of each new piece of yarn at stage 10.
   $1/2^{10} = 9.76$

10/10

3-13-12 6th hour

Name: Zachary Moe

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	½
2	4	1/4
3	8	1/8
4	16	1/16
5	32	1/32

÷2 1 · 2 = 1/2

÷2

÷2

÷2

÷2

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   Yes, it does because they all divide by 2 everytime/multiply
   b. Write a function that models the number of pieces of yarn at stage x.
   2^x
   c. Use the function to find the number of pieces of yarn at stage 10.
   $2^{10} = 1024$
2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   Yes, it does because they all still divide by 2 everytime/multiply
   b. Write a function that models the length of each new piece of yarn at stage x.
   $\frac{1}{2^x} = \frac{1}{x}$
   c. Use the function to find the length of each new piece of yarn at stage 10.
   $\frac{1}{2^{10}} = \frac{1}{1024}$

10/10

Name: Chris A

3-13-12

Cath Hour

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	1/2
2	4	1/4
3	8	1/8
4	16	1/16
5	32	1/32

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   yes because it increases at a constant rate?
   b. Write a function that models the number of pieces of yarn at stage x.
   $y = x \cdot \frac{1}{2}$
   c. Use the function to find the number of pieces of yarn at stage 10.
   $y = 10 \cdot \frac{1}{2} = x$
2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   No because I say so
   b. Write a function that models the length of each new piece of yarn at stage x.
   $y = 1\left(\frac{1}{x} \cdot \frac{2}{1}\right)$
   c. Use the function to find the length of each new piece of yarn at stage 10.
   $y = 10\left(\frac{1}{2}\right)$

10/10

Name: Khari Williams

Jibril

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	1/2
2	4	1/4
3	8	1/8
4	16	1/16
5	32	1/32

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   yes because they still double

   b. Write a function that models the number of pieces of yarn at stage x.

   $1(1+1)^x$

   c. Use the function to find the number of pieces of yarn at stage 10.

   $1(1+1)^{10}$ $1(2)^{10}$ $y = 1024$

2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   table doubles by 2 and divides

   b. Write a function that models the length of each new piece of yarn at stage x.

   $1(1+2)^x$ $1(3)^x$ 3^x

   c. Use the function to find the length of each new piece of yarn at stage 10.

   $1(1+2)^{10}$ $1(3)^{10}$

10/10

Name: Jibril Richardson

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	½
2	4	1/4
3	8	1/8
4	16	1/16
5	32	1/32

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know. no because it doubles each time.

   b. Write a function that models the number of pieces of yarn at stage x.
   $1(1+1)^x$

   c. Use the function to find the number of pieces of yarn at stage 10.
   $1(1+1)^{10}$ $1(2)^{10}$ $x = 1024$

2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know. no because the table doubles by 2 and divides.

   b. Write a function that models the length of each new piece of yarn at stage x.
   $1(1+2)^x$ $1(3)^x$ 3^x

   c. Use the function to find the length of each new piece of yarn at stage 10.
   $1(1+2)^{10}$ $1(3)^{10}$

10/10

Name: JaVann Stuber

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	1/2
2	4	1/4
3	8	1/8
4	16	1/16
5	32	1/32

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   Dubbles each times

   b. Write a function that models the number of pieces of yarn at stage x.

   $1(1+1)^x$

   c. Use the function to find the number of pieces of yarn at stage 10.

   $1(1+1)^x \quad 1(1+1)^{10} \quad y = 1024$

2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   Yes

   b. Write a function that models the length of each new piece of yarn at stage x.

   $1(1+2)^x$

   c. Use the function to find the length of each new piece of yarn at stage 10.

   $1(1+2)^{10}$

10/10

Name: Anthony Ramos

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

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Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	1/2
2	4	1/4
3	8	1/8
4	16	1/16
5	32	1/32

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   yes it does because divides by two every new stage and multiplys

   b. Write a function that models the number of pieces of yarn at stage x.

   2^x

   c. Use the function to find the number of pieces of yarn at stage 10.

   $2^{10} = 1024$

2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   yes because each stage the pieces multiply and divide by two

   b. Write a function that models the length of each new piece of yarn at stage x.

   $\frac{1}{2^x} = \frac{1}{x}$

   c. Use the function to find the length of each new piece of yarn at stage 10.

   $\frac{1}{2^{10}} = \frac{1}{1024}$

10/10

Name: Vily Vue 6th hour

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

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Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	½
2	4	¼
3	8	1/8
4	16	1/16
5	32	1/32

$\frac{1}{1 \cdot 2} = \frac{1}{2}$

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   That the represent by must by 2 and divide by 2.
   b. Write a function that models the number of pieces of yarn at stage x.
   2^x
   c. Use the function to find the number of pieces of yarn at stage 10.
   $2^{10} = 1024$
2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   yes, it does because then a is still divide by 2 every time multiply.
   b. Write a function that models the length of each new piece of yarn at stage x.
   $\frac{1}{2^x} = \frac{1}{x}$
   c. Use the function to find the length of each new piece of yarn at stage 10.
   $\frac{1}{2^{10}} = \frac{1}{1024}$

10/10

Name: Nick Carbonell

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

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Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	½
2	4	¼
3	8	⅛
4	16	1/16
5	32	1/32

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   yes because the data is multiplying by two. AN always by 2

   b. Write a function that models the number of pieces of yarn at stage x.

   2^x

   c. Use the function to find the number of pieces of yarn at stage 10.

   $2^{10} = 1024$

2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   yes because they all still divide by 2/multiply

   b. Write a function that models the length of each new piece of yarn at stage x.

   $\frac{1}{2x} = \frac{1}{x}$

   c. Use the function to find the length of each new piece of yarn at stage 10.

   $\frac{1}{2^{10}} = \frac{1}{1024}$

10/10

Name: Regina Harris II 6th

3/13/12

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	1/2
2	4	1/4
3	8	1/8
4	16	1/16
5	32	1/32

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

      Yes because it is "x^{2}"

   b. Write a function that models the number of pieces of yarn at stage x.

      x^{2}

   c. Use the function to find the number of pieces of yarn at stage 10.

      10^{2}

2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

      Yes cause it keeps going in the same order

   b. Write a function that models the length of each new piece of yarn at stage x.

      1^{x}

   c. Use the function to find the length of each new piece of yarn at stage 10.

      1^{10}

10/10

Name: Caleb Washington

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	½
2	4	1/4
3	8	1/8
4	16	1/16
5	32	1/32

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

      Yes Because it is x^2

   b. Write a function that models the number of pieces of yarn at stage x.

      x^2

   c. Use the function to find the number of pieces of yarn at stage 10.

      10^2

2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

      Yes it keeps going

   b. Write a function that models the length of each new piece of yarn at stage x.

      1^x

   c. Use the function to find the length of each new piece of yarn at stage 10.

      1^{16}

10/10

Name: Malik Sutton

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	½
2	4	1/4
3	8	1/8
4	16	1/16
5	32	1/32

6 4
12 8
2 3 6
4 7 8
9 4 8

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   Yes Because it increases at a steady rate
   b. Write a function that models the number of pieces of yarn at stage x.
   $y = x \cdot \frac{1}{2}$
   c. Use the function to find the number of pieces of yarn at stage 10.
   (9 4 2) 1/942
2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   No Because the numbers aren't equal
   b. Write a function that models the length of each new piece of yarn at stage x.
   $y = 5 \div 5$
   c. Use the function to find the length of each new piece of yarn at stage 10.
   1/947

10/10

Name: Tenn Rose

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	½
2	4	1/4
3	8	1/8
4	16	1/16
5	32	1/32

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

      Yes

   b. Write a function that models the number of pieces of yarn at stage x.

      x^2

   c. Use the function to find the number of pieces of yarn at stage 10.

      10^2

2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

      Yes cause it keeps going in the same order

   b. Write a function that models the length of each new piece of yarn at stage x.

      1^x

   c. Use the function to find the length of each new piece of yarn at stage 10.

      1^{10}

8/10

Name: Destiny T. Daw

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

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Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	½
2	4	1/4
3	8	1/6
4	16	1/16
5	32	1/32

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   yes, because its multiplying.

   b. Write a function that models the number of pieces of yarn at stage x.
   $x \cdot 2 =$ length of new piece.

   c. Use the function to find the number of pieces of yarn at stage 10.
   $2^{10} = 1,024$

2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   b. Write a function that models the length of each new piece of yarn at stage x.

   c. Use the function to find the length of each new piece of yarn at stage 10.

8/10

Name: Jacquay Jones

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

Take your length of yarn. Consider it to be 1 unit long. Fold it in half and cut. You are now left with two pieces of yarn, each half the length of the original piece of yarn.

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For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	½
2	4	¼
3	8	⅛
4	16	1/16
5	32	1/32

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.
   Yes, because the string was multiplying by two,

   b. Write a function that models the number of pieces of yarn at stage x.
   $x \cdot 2 =$ Length of new pieces

   c. Use the function to find the number of pieces of yarn at stage 10.
   $b^{10} = 1.014$
2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   b. Write a function that models the length of each new piece of yarn at stage x.

   c. Use the function to find the length of each new piece of yarn at stage 10.

10/16

Name: Destiny m Davis

Cutting Yarn Activity

After this lesson, you should be able to: Use collected data to write an exponential model.

Step 1: Fold and Cut

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Step 2: Complete the Table

For each stage, fold *all* the pieces of yarn in half and cut. Then record the number of new pieces and the length of each new piece until the table is complete.

Stage	Number of Pieces	Length of each new piece
1	2	½
2	4	¼
3	8	⅛
4	16	1/16
5	32	1/32

Step 3: Drawing Conclusions

1. Use the data in the first and second columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   yeah because its multiplying

   b. Write a function that models the number of pieces of yarn at stage x.

   x · 2 = length of new peice

   c. Use the function to find the number of pieces of yarn at stage 10.

   $2^{10} = 1,024$

2. Use the data in the first and third columns of the table.
   a. Does the data represent an exponential function? Explain how you know.

   yeah because its multiplying

   b. Write a function that models the length of each new piece of yarn at stage x.

   $\frac{1}{2}x$

   c. Use the function to find the length of each new piece of yarn at stage 10.

   $1/2^{10} = 9.76$