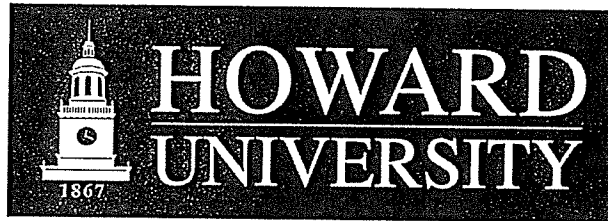


Name _____



Howard University

4th Grade Math

Remote Learning Packet

November 16-24, 2020

Name: _____
BCCSG

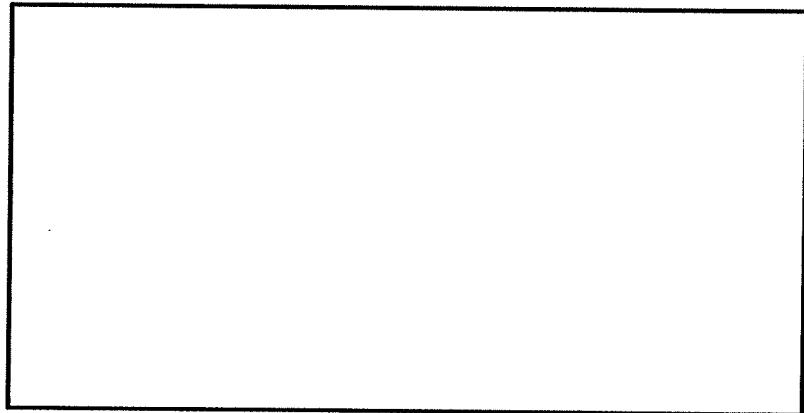
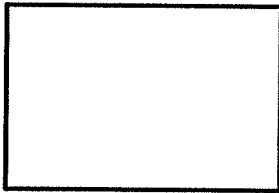
November 16, 2020
Howard

Module 3, Lesson 3

Learning Target: I can demonstrate understanding of area and perimeter formulas by solving multi-step word problems.

Input

1. The projection screen in the school auditorium is 5 times as long and 5 times as wide as the screen in the library. The screen in the library is 4 feet long, with a perimeter of 14 feet. What is the perimeter of the screen in the auditorium?



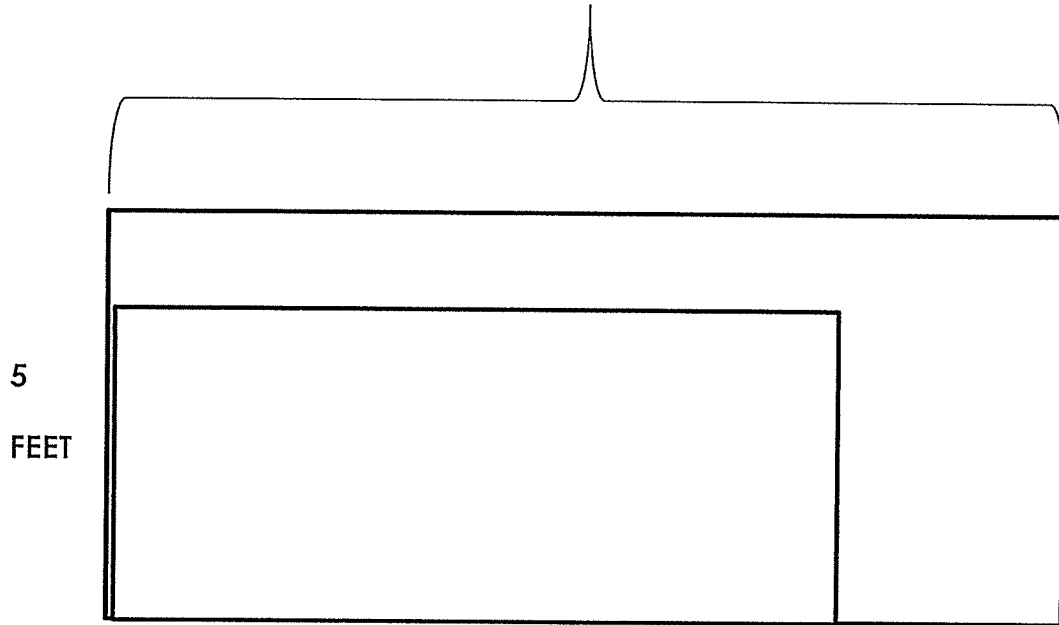
What is the formula for perimeter?

$$P = \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad}$$

Or

$$P = 2 \times (\underline{\quad} + \underline{\quad})$$

2. The width of David's tent is 5 feet. The length is twice the width. David's rectangular air mattress measures 3 feet by 6 feet. If David puts the air mattress in the tent, how many square feet of floor space will be available for the rest of his things?



What do we need to find out first in order to solve this problem? We know that David's tent has a width of _____ feet. We know that the length is 2 times the width. _____ feet x _____ = _____ feet. Now that we know the length and the width, we can solve to find the area of David's tent. $A = l \times w$ so $A =$ _____ feet x _____ feet. The area of David's tent is _____ feet. I know the length and width of David's air mattress, so I can use my formula to find the area of the mattress. $A = l \times w =$ _____ feet x _____ feet so the area of David's mattress is _____ feet. If I know the area of David's tent and the area of the mattress, I can use my subtraction algorithm to find the floor space that is left over.

$$\text{_____ feet} - \text{_____ feet} = \text{_____ feet.}$$

There is _____ feet of space left in the tent.

3. Jackson's bedroom has an area of 90 square feet. The area of his bedroom is 9 times that of his closet. If the closet is 2 feet wide, what is its length?

What do we need to find out first? We need to use the _____ of Jackson's bedroom to work backwards and find the area of his closet.

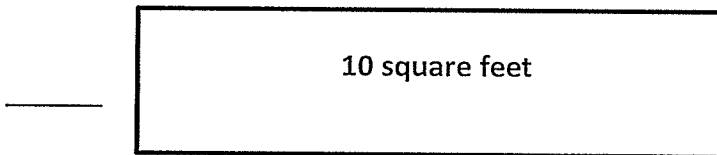
What is the area of Jackson's bedroom? _____ square feet

How many times larger is the area of his bedroom than his closet? _____ times larger

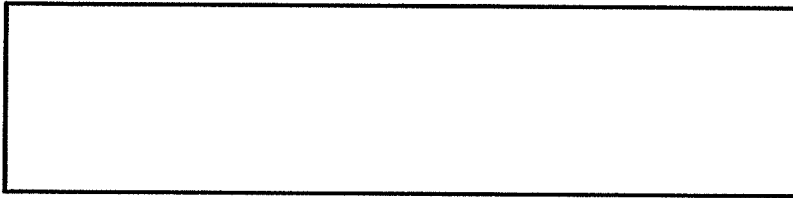
We can use the following formula:

90 square feet \div 9 = _____ square feet.

Now that we know the area of his closet, as well as its width, we can solve to find its length:



4. The length of a rectangular deck is 4 times its width. If the deck's perimeter is 30 feet, what is the deck's area?



$P = 30$ feet

CFU/Exit Ticket:

1, A poster is 3 times as long as it is wide A banner is 5 times as long as it is wide. Both the banner and the poster have a perimeter of 24 inches. What are the length and the width of the poster and the banner?

Name: _____
BCCSG

November 17, 2020
Howard

Module 3, Lesson 4

Learning Target: I can interpret and represent patterns when multiplying by 10, 100, and 1,000 in arrays and numerically.

Input

Draw number disks to represent products when multiplying by a one-digit number.

1.

Watch as I model number disks on my place-value chart. How many disks did I draw? _____ disks, so I have _____ ones. How many groups of 3 ones do you see? We see just _____ group of 3 ones. I can represent that as $3 \text{ ones} \times 1$. What if I wanted to multiply 3 ones by 10 instead? I can represent that as $3 \text{ ones} \times 10$. How can I show this on my place value chart? I can move each disk over to the tens place, so now I have _____ tens. $3 \text{ ones} \times 10 = 3 \text{ tens}$. What if I wanted to multiply that by 10? I can do the same thing! I can move the disks one more place into the hundreds and get _____ hundreds. $3 \text{ ones} \times 10 \times 10 =$ _____ . I started with 3 ones. What I did multiply 3 ones by in order to get 3 hundreds? We multiplied by _____ and then multiplied by _____ again, which is the same as multiplying by 10×10 , which is _____. How would we multiply $3 \times 1,000$? We could show it with $3 \text{ ones} \times$ _____ to get 3 tens. Then we could multiply by 10 again to get 3 hundreds and multiply by 10 again to get 3 _____. What is $3 \times 10 \times 10 \times 10$

(or $3 \times 1,000$). It is _____.

2. Model 4×10 , 4×100 , and $4 \times 1,000$ on your place value chart like we did in the first question

Draw number disks to represent products when multiplying by a two-digit number

3. Use number disks to represent 15×10

4. Use number disks to represent 22×100

Decomposing multiples of 10 before multiplying.

5. 4×20

Just like 3×100 could be expressed as $3 \times 10 \times 10$, there are different ways to show 4×20 to help us multiply. What is another way I could express 4×20 ?

a) 4×2 tens

b) $4 \times 2 \times 10$

When you are multiplying by multiples of ten, you can decompose a factor to help you solve!

6. 6×400

7. 4×500

CFU/Exit Ticket:

1. Complete the following equations:

a) $5 \times 10 = \underline{\hspace{2cm}}$

b) $\underline{\hspace{2cm}} \times 5 = 500$

c) $5,000 = \underline{\hspace{2cm}} \times 1,000$

d) $10 \times 2 = \underline{\hspace{2cm}}$

e) $\underline{\hspace{2cm}} \times 20 = 2,000$

f) $2,000 = 10 \times \underline{\hspace{2cm}}$

g) $100 \times 18 = \underline{\hspace{2cm}}$

h) $\underline{\hspace{2cm}} = 10 \times 32$

i) $4,800 = \underline{\hspace{2cm}} \times 100$

j) $60 \times 4 = \underline{\hspace{2cm}}$

k) $5 \times 600 = \underline{\hspace{2cm}}$

l) $8,000 \times 5 = \underline{\hspace{2cm}}$

Name: _____
BCCSG

November 18, 2020
Howard

Interim Assessment #1

Scholars will report to school from 8:30- 1:30 p.m. to complete both the ELA and Math interim assessments. All scholars will be testing following 6ft social distancing protocols and will be required to wear masks. Scholars should bring their fully charged Chromebook to the testing session. During this testing day, all Zoom instruction will be cancelled. Attendance will be taken at the beginning of the testing session and there will be a meal break for scholars. We ask that parents/guardians drop their scholar off at the front entrance and pick their scholar up at the end of the testing session.

Date	Start Time	End Time
11/18/2020	8:30 PM	1:30

Name: _____
BCCSG

November 19, 2020
Howard

Module 3, Lesson 5

Learning Target: I can multiply multiples of 10, 100, and 1,000 by single digits, recognizing patterns.

Input

Use number disks to represent multiplication patterns.

1. 2 ones x 4 2 tens x 4 2 hundreds x 4 2 thousands x 4

Show 2 ones x 4 on your place value chart. Circle each group of 2 ones.

Show 2 tens x 4 on your place value chart. Circle each group of 2 tens.

2 ones x 4 is _____ ones. 2 tens x 4 is _____ tens. _____ tens = 80.

Show 2 hundreds x 4 on your place value chart. Circle each group of 2 hundreds.

What did you notice about multiplying 2 hundreds x 4 compared to 2 tens x 4? There was the _____ number of disks, but the disks I used in this problem represented 1 hundred instead of 10. The _____ of these disks is in the hundreds, so my answer is _____. What do you think would happen if we multiplied 2 thousands x 4? It would look the same again, except we would use disks representing _____, so the answer would be _____ thousands or _____.

2. 30 x 3, 300 x 3, 3,000 x 3

Show 30 x 3 on your place value chart.

Show 300 x 3 on your place value chart.

Show $3,000 \times 3$ on your place value chart.

$$3 \times 30 = \underline{\hspace{2cm}}$$

$$3 \times 300 = \underline{\hspace{2cm}}$$

$$3 \times 3,000 = \underline{\hspace{2cm}}$$

Numerically represent single-digit numbers times a multiple of 10.

3. 8×2 8×20 8×200 $8 \times 2,000$

$$8 \times 2 \text{ ones} = \underline{\hspace{2cm}} \text{ ones}$$

$$8 \times 2 \text{ tens} = \underline{\hspace{2cm}} \text{ tens}$$

$$8 \times 2 \text{ hundreds} = \underline{\hspace{2cm}} \text{ hundreds}$$

$$8 \times 2 \text{ thousands} = \underline{\hspace{2cm}} \text{ thousands}$$

What patterns do you notice? All of the problems have _____ as a factor. The units are in order of the place value chart, _____ to _____. The unit we multiply is the same unit we get in our answer.

4. 5×2 5×20 5×200 $5 \times 2,000$

$$5 \times 2 \text{ ones} = \underline{\hspace{2cm}} \text{ ones}$$

$$5 \times 2 \text{ tens} = \underline{\hspace{2cm}} \text{ tens}$$

$$5 \times 2 \text{ hundreds} = \underline{\hspace{2cm}} \text{ hundreds}$$

$$5 \times 2 \text{ thousands} = \underline{\hspace{2cm}} \text{ thousands}$$

Solve a word problem finding the sum of two different products of a single-digit number by a two- and three-digit multiple of 10.

5. Francisco plays a video game and earns 60 points for every coin he collects. He collected 7 coins. How many points did he earn for the coins he collected?

6. Francisco also earns 200 points for every level he completes in the game. He completed 7 levels. How many points did he earn for the levels that he completed?

7. What is the *total* number of points that Francisco earned?

Solve a word problem involving *1,000 times as many*.

8. At the concert, there were 5,000 people in the audience. That was 1,000 times the number of performers. How many performers were at the concert?

CFU/Exit Ticket

1. Find the product.

$30 \times 3 =$	$8 \times 20 =$	$6 \times 400 =$	$2 \times 900 =$
$8 \times 80 =$	$30 \times 4 =$	$500 \times 6 =$	$8 \times 5,000 =$

2. Bonnie worked for 7 hours each day for 30 days. How many hours did she work altogether?

Name: _____
BCCSG

November 20, 2020
Howard

Module 3, Lesson 6

Learning Target: I can multiply two-digit multiples of 10 by two-digit multiples of 10 with the area model.

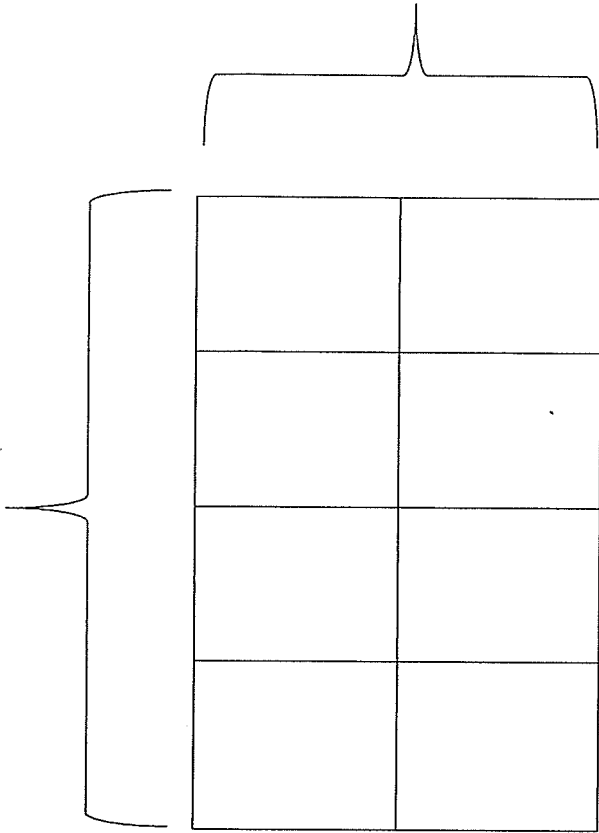
Input

Use the place value chart to multiply a two-digit multiple of 10 by a two-digit multiple of 10.

1. 30×20

Create an area model to represent a two-digit multiple of 10 by a two-digit multiple of 10.

2. Model 40×20 as an area



Draw an area model to represent a two-digit multiple of 10 by a two-digit multiple of 10.

3. 50×40

Name: _____
BCCSG

November 23, 2020
Howard

Module 3, Lesson 7

Learning Target: I can use place value disks to represent two-digit by one-digit multiplication.

Input

1. Represent 2×23 with disks, writing a matching equation and recording the partial products vertically.

Draw disks on your place value chart to represent 23. Now, draw disks on your place value chart to show one more group of 23.

What is the total value in the ones place? _____ ones.

Write _____ x _____ ones under the ones column.

Let's look at the tens column. What is the total value in the tens? _____ tens.

2. Now try it with 3×23

3. Model and solve 4×54

Draw disks to represent 54 on your place value chart. What is 54 in unit form?

_____ tens _____ ones. Draw 3 more groups of 54 on your chart and then write 4

$\times 54$ vertically on your white board. What is the value of the ones now? _____ ones.

Record that on your white board. What is the value of the tens? 4×5 tens = _____

tens. Add up the *partial products* you recorded. What is the sum? The sum

is _____.

CFU/Exit Ticket:

1. Represent the following expressions with disks, regrouping as necessary. To the right, record the partial products vertically.

a) 6×41

b) 7×31

Name: _____
BCCSG

November 24, 2020
Howard

Module 3, Lesson 78

Learning Target: I can extend the use of place value disks to represent three- and four-digit by one digit multiplication.

Input

1. Represent 2×324 with disks, writing a matching equation, and recording the partial products vertically.

Use your place value chart to represent the number 2 times 324. What is the value in the ones column? _____ ones. What is the value in the tens column? _____ tens. What is the value in the hundreds column? _____ hundreds. Let's write an expression that shows the total value expressed in the chart.

$$2 \times \text{_____ hundreds} + 2 \times \text{_____ tens} + 2 \times \text{_____ ones.}$$

2. Model and solve 4×605 modeling the repeated addition on the place value chart.

Draw disks to represent 4×605 on your place value chart. Write 4×605 vertically on your white board. What is the value of the digit in each places?

Ones: _____

Tens: _____

Hundreds: _____

Do we need to regroup? _____, we can change 10 ones for 1 ten twice, and we can change 10 hundreds for 1 thousand twice. Let's model this together on our place value chart. Now, what value is represented on your place value chart? _____ thousands, _____ hundreds, _____ tens, and _____ ones. That equals _____.

3. Model and solve 5×464 modeling the repeated addition on the place value chart.

4. Solve 3×851 using a partial products drawing on the place value chart.

5. Solve $4 \times 6,379$ using a partial products drawing on the place value chart.

CFU/Exit Ticket:

1. Represent the following expressions with disks, regrouping as necessary.

a) 4×513

b) $3 \times 1,054$
