

Name _____

Solve Multi-Step Problems Using Equations

I Can solve real-world multi-step problems using multiplication, addition, and subtraction.

Florida's B.E.S.T.

- Algebraic Reasoning 4.AR.1.1
- Number Sense & Operations 4.NSO.2.3, 4.NSO.2.1
- Mathematical Thinking & Reasoning MTR.2.1, MTR.3.1, MTR.4.1, MTR.5.1



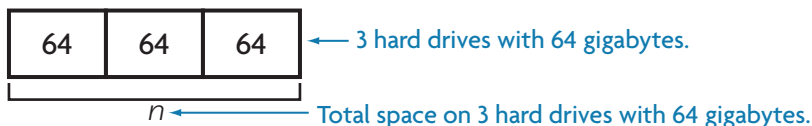
UNLOCK the Problem

Chris's computer has 3 hard drives with 64 gigabytes of space each, and 2 hard drives with 16 gigabytes of space each. The files on his computer use 78 gigabytes of space. How much hard drive space does his computer have left?



Use multiple single-step equations.

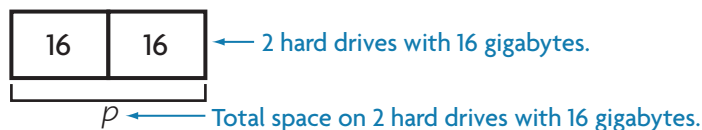
STEP 1 Find how much hard drive space is on 3 hard drives with 64 gigabytes of space each.



$$3 \times 64 = n$$

$$\underline{\hspace{2cm}} = n$$

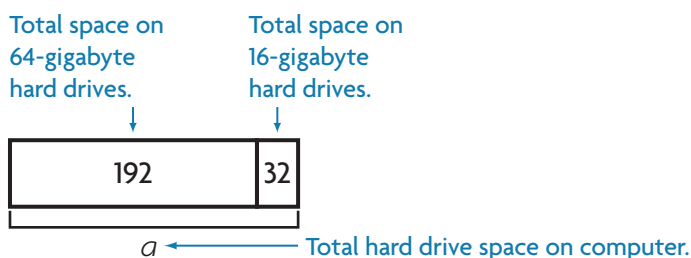
STEP 2 Find how much hard drive space is on 2 hard drives with 16 gigabytes of space.



$$2 \times 16 = p$$

$$\underline{\hspace{2cm}} = p$$

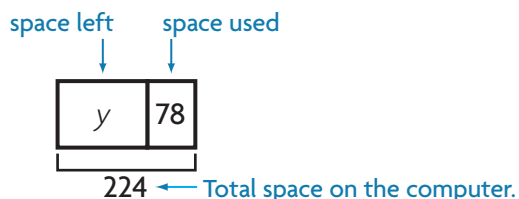
STEP 3 Find the total hard drive space on the computer.



$$192 + 32 = a$$

$$\underline{\hspace{2cm}} = a$$

STEP 4 The files use 78 gigabytes of space. Find how much hard drive space the computer has left.



$$224 - 78 = y$$

$$\underline{\hspace{2cm}} = y$$

So, Chris has _____ gigabytes of hard drive space left on his computer.

Share and Show

Math
Board

1. Carnie and Doug bake cookies to sell at a bake sale. Carnie makes 3 batches of 17 cookies each and Doug makes 3 batches of 20 cookies each. After ten minutes at the bake sale, they sold 32 cookies. How many cookies do Carnie and Doug have left to sell?

17	17	17
p		

$$3 \times 17 = p; 51 = p$$

← First, multiply 3×17 .
Let p represent the number of cookies Carnie makes.

20	20	20
a		

$$3 \times 20 = a; 60 = a$$

← Next, multiply 3×20 .
Let a represent the number of cookies Doug makes.

51	60
y	

$$51 + 60 = y; 111 = y$$

← Then, add the two products.
Let y represent the number of cookies Carnie and Doug make.

$$111 - 32 = n; 79 = n$$

← Finally, subtract to find the number of cookies Carnie and Doug have left to sell.



2. Dyani buys 3 bags of lollipops, with 12 lollipops in each bag. She also buys 4 bags of gum, with 11 pieces in each bag. How many lollipops and pieces of gum does Dyani have?

3. Simba has 4 boxes with 32 marbles in each box. He has 7 boxes with 18 shells in each box. If he gets 20 marbles from a friend, how many marbles and shells does he have?

On Your Own

4. Mario drove 60 miles each day to and from work for 5 days. Then he drove 54 miles each day on Saturday and Sunday. How many miles did Mario drive during those seven days?

5. Keqing has 3 binders with 25 stamps in each binder. She has 5 binders with 24 baseball cards in each binder. If she gives 35 stamps to a friend, how many stamps and cards does she have left?

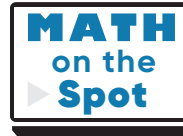
Math
Talk

MTR
3.1 Complete tasks with mathematical fluency.

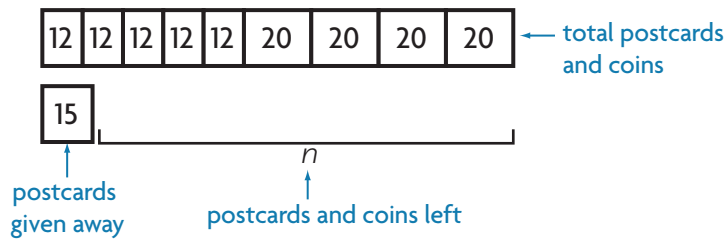
Explain why in Problem 1 you added during step 3 instead of multiplying.

Name _____

6. Dominic has 5 books with 12 postcards in each book. He has 4 boxes with 20 coins in each box. If he gives 15 postcards to a friend, how many postcards and coins does he have?



Dominic drew this model.



Look at the steps Dominic used to solve this problem. Find and describe his error.

Dominic used these steps to solve.

$$\begin{aligned} 5 + 12 &= p \\ 4 + 20 &= c \\ 17 + 24 &= y \\ 41 - 15 &= n \\ 26 &= n \end{aligned}$$

Use the correct steps to solve the problem.

So, there are _____ postcards and coins left.

Problem Solving • Applications

Fill in the bubble completely to show your answer.

7. Eric is getting his mountain climbing certificate. There are 63 days that Eric climbs for 2 hours, there are 97 days that he climbs for 1 hour, and there are 22 days that he climbs for 3 hours. How many more hours does Eric need to climb until he earns a certificate for climbing 500 hours?
- (A) 211 hours (C) 318 hours
(B) 289 hours (D) 321 hours
8. Hanh has 315 photos that she wants to put into albums. She buys 4 albums that hold 24 photos each. There are 3 albums that hold 72 photos each. Hanh plans to put any leftover photos into frames. How many frames will Hanh need to buy?
- (A) 0 (C) 5
(B) 3 (D) 13
9. The soccer team sells 54 bagels with cream cheese for \$2 each and 36 muffins for \$1 each during a bake sale. The coach uses the bake sale money to buy socks for the 14 players at \$6 a pair. How much money does the coach have left to buy soccer balls?
- (A) \$0 (C) \$60
(B) \$27 (D) \$138
10. Trina has 2 bags with 14 pinecones in each bag. She has 7 boxes with 15 acorns in each box. If she trades 5 pinecones for 10 acorns, how many pinecones and acorns does she have?
- (A) 28
(B) 105
(C) 133
(D) 138

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Interactive Examples

Problem Solving

1. Rebecca bought a flat of 144 pansies. She planted 3 rows of 16 pansies each. She planted 4 rows of 14 pansies each. How many pansies does she have left to plant?

16	16	16	14	14	14	14	p
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144

$3 \times 16 = \underline{\hspace{2cm}}$

$4 \times 14 = \underline{\hspace{2cm}}$

$p = 144 - \underline{\hspace{2cm}} - \underline{\hspace{2cm}}$

$p = \underline{\hspace{2cm}}$

2. Kiara packed 18 DVDs in each of 4 boxes. She packed 15 DVDs in each of 5 boxes. She has 8 DVDs left over. How many DVDs does Kiara have?
3. Monty buys 2 adult dinner tickets for \$22 each, 2 senior tickets for \$18 each and 3 child tickets for \$12 each. How much change will he get from \$120?

4. Quaddus has 4 shelves with 22 dinosaur models on each shelf. He has 3 shelves with 20 dragon models on each shelf. How many more dinosaur models than dragon models does Quaddus have?
5. Alexis needs 280 screws to finish her deck. She bought 3 boxes of screws with 40 screws in a box. She had 168 screws. How many screws will she have left over when she finishes the deck?

Lesson Check

Fill in the bubble completely to show your answer.

6. Erika baked 7 trays of 12 muffins each. Simon baked 5 trays of 18 muffins each. They agreed to make 200 muffins for the school bake sale. How many more muffins do they need to make?
- (A) 26
(B) 36
(C) 38
(D) 52
8. Ghandi bagged his potatoes in 18 ten-pound bags, 16 five-pound bags, and 4 twenty-five pound bags. He has 2 pounds of potatoes left over. How many pounds of potatoes does Ghandi have?
- (A) 262 pounds
(B) 352 pounds
(C) 358 pounds
(D) 362 pounds
7. Victoria is buying stickers. She bought 3 packages of stars with 24 in each package. She bought 2 packages of rainbows with 16 in each package. She bought 4 packages of hearts with 10 in each package. She used 82 of the stickers to make cards. How many stickers does Victoria have left?
- (A) 62
(B) 72
(C) 96
(D) 114
9. Mateo bought 6 hats for \$14 each and 3 belts for \$33 each. How much change did he get from \$200?
- (A) \$7
(B) \$17
(C) \$27
(D) \$58

Spiral Review

10. Jarita bought 352 ounces of juice. She used 320 ounces of juice to make punch. How many ounces of juice does Jarita have left?
- (A) 22 ounces
(B) 32 ounces
(C) 42 ounces
(D) 52 ounces
11. Jules counted 30 big balloons. There were 6 times as many small balloons as big balloons. How many small balloons were there?
- (A) 18
(B) 108
(C) 180
(D) 1,800