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Worksheet 3 Multiplying Ones, Tens, and Hundreds with Regrouping

Fill in the blanks.

Example

$$13 \text{ ones} = \underline{1} \text{ ten } \underline{3} \text{ ones}$$

1. 17 ones = _____ ten _____ ones
2. 15 ones = 1 _____ 5 _____
3. 19 ones = 1 _____ 9 _____
4. 12 tens = _____ hundred _____ tens
5. 16 tens = _____ hundred _____ tens
6. 14 tens = 1 _____ 4 _____
7. 18 tens = 1 _____ 8 _____

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Fill in the missing numbers.

Example

$$\begin{array}{r} 57 \\ \times 3 \\ \hline 171 \end{array}$$

Step 1 $3 \times \underline{7}$ ones = $\underline{21}$ ones
 $= \underline{2}$ tens $\underline{1}$ one

Step 2 $3 \times \underline{5}$ tens = $\underline{15}$ tens

$\underline{2}$ tens + $\underline{15}$ tens = $\underline{17}$ tens

$\underline{17}$ tens = $\underline{1}$ hundred $\underline{7}$ tens

$3 \times 57 = \underline{1}$ hundred $\underline{7}$ tens $\underline{1}$ one
 $= \underline{171}$

8.

$$\begin{array}{r} 64 \\ \times 4 \\ \hline \end{array}$$

Step 1 $4 \times \underline{\quad}$ ones = $\underline{\quad}$ ones
 $= \underline{\quad}$ ten $\underline{\quad}$ ones

Step 2 $4 \times \underline{\quad}$ tens = $\underline{\quad}$ tens

$\underline{\quad}$ ten + $\underline{\quad}$ tens = $\underline{\quad}$ tens

$\underline{\quad}$ tens = $\underline{\quad}$ hundreds $\underline{\quad}$ tens

$4 \times 64 = \underline{\quad}$ hundreds $\underline{\quad}$ tens $\underline{\quad}$ ones
 $= \underline{\quad}$

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9.
$$\begin{array}{r} 36 \\ \times 5 \\ \hline \end{array}$$
 Step 1 $5 \times \underline{\quad\quad}$ ones = $\underline{\quad\quad}$ ones
 $= \underline{\quad\quad}$ tens $\underline{\quad\quad}$ ones

Step 2 $5 \times \underline{\quad\quad}$ tens = $\underline{\quad\quad}$ tens
 $\underline{\quad\quad}$ tens + $\underline{\quad\quad}$ tens = $\underline{\quad\quad}$ tens
 $\underline{\quad\quad}$ tens = $\underline{\quad\quad}$ hundred $\underline{\quad\quad}$ tens

$5 \times 36 = \underline{\quad\quad}$ hundred $\underline{\quad\quad}$ tens $\underline{\quad\quad}$ ones
 $= \underline{\quad\quad}$

Multiply.

10.
$$\begin{array}{r} 67 \\ \times 4 \\ \hline \end{array}$$

11.
$$\begin{array}{r} 68 \\ \times 3 \\ \hline \end{array}$$

12.
$$\begin{array}{r} 74 \\ \times 5 \\ \hline \end{array}$$

13.
$$\begin{array}{r} 49 \\ \times 2 \\ \hline \end{array}$$

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Fill in the missing numbers.*Example*

$$\begin{array}{r} 263 \\ \times 3 \\ \hline 789 \end{array}$$

Step 1 $3 \times \underline{3}$ ones = $\underline{9}$ ones

Step 2 $3 \times \underline{6}$ tens = $\underline{18}$ tens
= $\underline{1}$ hundred $\underline{8}$ tens

Step 3 $3 \times \underline{2}$ hundreds = $\underline{6}$ hundreds
 $\underline{1}$ hundred + $\underline{6}$ hundreds
= $\underline{7}$ hundreds

$$3 \times 263 = \underline{7} \text{ hundreds } \underline{8} \text{ tens } \underline{9} \text{ ones}$$

$$= \underline{789}$$

14.

$$\begin{array}{r} 172 \\ \times 4 \\ \hline \end{array}$$

Step 1 $4 \times \underline{\hspace{2cm}}$ ones = $\underline{\hspace{2cm}}$ ones

Step 2 $4 \times \underline{\hspace{2cm}}$ tens = $\underline{\hspace{2cm}}$ tens
= $\underline{\hspace{2cm}}$ hundreds $\underline{\hspace{2cm}}$ tens

Step 3 $4 \times \underline{\hspace{2cm}}$ hundred = $\underline{\hspace{2cm}}$ hundreds
 $\underline{\hspace{2cm}}$ hundreds + $\underline{\hspace{2cm}}$ hundreds
= $\underline{\hspace{2cm}}$ hundreds

$$4 \times 172 = \underline{\hspace{2cm}} \text{ hundreds } \underline{\hspace{2cm}} \text{ tens } \underline{\hspace{2cm}} \text{ ones}$$

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

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15.

$$\begin{array}{r} 231 \\ \times 4 \\ \hline \end{array}$$

Step 1 $4 \times$ _____ one = _____ ones

Step 2 $4 \times$ _____ tens = _____ tens
= _____ hundred _____ tens

Step 3 $4 \times$ _____ hundreds = _____ hundreds
_____ hundred + _____ hundreds
= _____ hundreds

$$4 \times 231 = \text{_____ hundreds } \text{_____ tens } \text{_____ ones}$$
$$= \text{_____}$$

16.

$$\begin{array}{r} 141 \\ \times 5 \\ \hline \end{array}$$

Step 1 $5 \times$ _____ one = _____ ones

Step 2 $5 \times$ _____ tens = _____ tens
= _____ hundreds _____ tens

Step 3 $5 \times$ _____ hundred = _____ hundreds
_____ hundreds + _____ hundreds
= _____ hundreds

$$5 \times 141 = \text{_____ hundreds } \text{_____ tens } \text{_____ ones}$$
$$= \text{_____}$$

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17.
$$\begin{array}{r} 246 \\ \times 3 \\ \hline \end{array}$$
 Step 1 $3 \times$ _____ ones = _____ ones
= _____ ten _____ ones

Step 2 $3 \times$ _____ tens = _____ tens
_____ ten + _____ tens = _____ tens
= _____ hundred _____ tens

Step 3 $3 \times$ _____ hundreds = _____ hundreds
_____ hundred + _____ hundreds
= _____ hundreds

$3 \times 246 =$ _____ hundreds _____ tens _____ ones
= _____

Multiply.

18.
$$\begin{array}{r} 494 \\ \times 2 \\ \hline \end{array}$$

19.
$$\begin{array}{r} 373 \\ \times 3 \\ \hline \end{array}$$

20.
$$\begin{array}{r} 262 \\ \times 4 \\ \hline \end{array}$$

21.
$$\begin{array}{r} 154 \\ \times 3 \\ \hline \end{array}$$

22.
$$\begin{array}{r} 448 \\ \times 2 \\ \hline \end{array}$$

23.
$$\begin{array}{r} 229 \\ \times 4 \\ \hline \end{array}$$

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Solve.

Example

A bird has 2 legs. How many legs do 126 birds have in all?

$$126 \times 2 = 252$$

126 birds have 252 legs in all.

- 24.** Fauzi has 4 books. Each book has 228 pages. How many pages are there in all?

- 25.** There are 247 cars in a parking garage. How many wheels are there in the parking garage?

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- 26.** A tailor sews 2 blouses a day. How many blouses can she sew in a year?
A year has 365 days.

- 27.** A box contains 120 paperclips. How many paperclips are there in
8 such boxes?

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Worksheet 5 Division with Regrouping in Tens and Ones

Complete.

Example

$$7 \text{ ones} \div 2 = \underline{\quad 3 \quad} \text{ ones, remainder } \underline{\quad 1 \quad} \text{ one}$$

$$\begin{array}{r} \boxed{3} \\ 2 \overline{) 7} \\ \underline{\boxed{6}} \\ \boxed{1} \end{array}$$

1. $5 \text{ ones} \div 3 = \underline{\hspace{2cm}}$ one, remainder $\underline{\hspace{2cm}}$ ones

$$\begin{array}{r} \boxed{} \\ 3 \overline{) 5} \\ \underline{\boxed{}} \\ \boxed{} \end{array}$$

2. $9 \text{ ones} \div 4 = \underline{\hspace{2cm}}$ ones, remainder $\underline{\hspace{2cm}}$ one

$$\begin{array}{r} \boxed{} \\ 4 \overline{) 9} \\ \underline{\boxed{}} \\ \boxed{} \end{array}$$

3. $9 \text{ ones} \div 2 = \underline{\hspace{2cm}}$ ones, remainder $\underline{\hspace{2cm}}$ one

$$\begin{array}{r} \boxed{} \\ 2 \overline{) 9} \\ \underline{\boxed{}} \\ \boxed{} \end{array}$$

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Divide.

4. $4 \div 2 =$ _____

5. $6 \div 3 =$ _____

6. $8 \div 4 =$ _____

7. $8 \div 2 =$ _____

8. $9 \div 3 =$ _____

9. $4 \div 4 =$ _____

Complete.

Example

$$\begin{array}{r} \boxed{2} \boxed{5} \\ 2 \overline{) 50} \\ \underline{40} \\ \boxed{1} \boxed{0} \\ \underline{10} \\ \boxed{0} \end{array}$$

5 tens \div 2 = 2 tens, remainder 1 ten

1 ten = 10 ones

10 ones \div 2 = 5 ones, remainder 0 ones

$50 \div 2 =$ 2 tens 5 ones, remainder 0
 $=$ 25 R 0

10.

$$\begin{array}{r} \boxed{} \boxed{} \\ 3 \overline{) 70} \\ \underline{} \\ \boxed{} \boxed{} \\ \underline{} \\ \boxed{} \boxed{} \\ \underline{} \\ \boxed{} \end{array}$$

7 tens \div 3 = _____ tens, remainder _____ ten

_____ ten = _____ ones

_____ ones \div 3 = _____ ones, remainder _____ one

$70 \div 3 =$ _____ tens _____ ones, remainder _____
 $=$ _____ R _____

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11.

$$\begin{array}{r} \square \square \\ 4 \overline{) 70} \\ \square \square \\ \hline \square \square \\ \square \square \\ \hline \square \end{array}$$

7 tens \div 4 = _____ ten, remainder _____ tens

_____ tens = _____ ones

_____ ones \div 4 = _____ ones, remainder _____ ones

70 \div 4 = _____ ten _____ ones, remainder _____
= _____ R _____

12.

$$\begin{array}{r} \square \square \\ 3 \overline{) 80} \\ \square \square \\ \hline \square \square \\ \square \square \\ \hline \square \end{array}$$

8 tens \div 3 = _____ tens, remainder _____ tens

_____ tens = _____ ones

_____ ones \div 3 = _____ ones, remainder _____ ones

80 \div 3 = _____ tens _____ ones, remainder _____
= _____ R _____

Fill in the missing numbers.

Example

40 \div 3 = 13, remainder 1

13. 60 \div 2 = _____, remainder _____

14. 90 \div 4 = _____, remainder _____

15. 80 \div 3 = _____, remainder _____

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Complete.

Example

$$14 \text{ ones} \div 2 = \underline{7} \text{ ones}$$

$$\begin{array}{r} \overline{) 14} \\ \underline{14} \\ 0 \end{array}$$

16. $18 \text{ ones} \div 3 = \underline{\hspace{2cm}} \text{ ones}$

$$\begin{array}{r} \overline{) 18} \\ \underline{ } \\ \end{array}$$

17. $24 \text{ ones} \div 4 = \underline{\hspace{2cm}} \text{ ones}$

$$\begin{array}{r} \overline{) 24} \\ \underline{ } \\ \end{array}$$

18. $25 \text{ ones} \div 5 = \underline{\hspace{2cm}} \text{ ones}$

$$\begin{array}{r} \overline{) 25} \\ \underline{ } \\ \end{array}$$

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Fill in the missing numbers.

Example

$$36 = 2 \text{ tens } \underline{16} \text{ ones}$$

$$36 \div 2 = \underline{1} \text{ ten } \underline{8} \text{ ones}$$

19. $34 = \underline{\hspace{2cm}} \text{ tens } 14 \text{ ones}$

$$34 \div 2 = \underline{\hspace{2cm}} \text{ ten } \underline{\hspace{2cm}} \text{ ones}$$

20. $56 = 4 \text{ tens } \underline{\hspace{2cm}} \text{ ones}$

$$56 \div 4 = \underline{\hspace{2cm}} \text{ ten } \underline{\hspace{2cm}} \text{ ones}$$

21. $42 = \underline{\hspace{2cm}} \text{ tens } 12 \text{ ones}$

$$42 \div 3 = \underline{\hspace{2cm}} \text{ ten } \underline{\hspace{2cm}} \text{ ones}$$

22. $78 = \underline{\hspace{2cm}} \text{ tens } \underline{\hspace{2cm}} \text{ ones}$

$$78 \div 3 = \underline{\hspace{2cm}} \text{ tens } \underline{\hspace{2cm}} \text{ ones}$$

23. $64 = \underline{\hspace{2cm}} \text{ tens } \underline{\hspace{2cm}} \text{ ones}$

$$64 \div 4 = \underline{\hspace{2cm}} \text{ ten } \underline{\hspace{2cm}} \text{ ones}$$

Divide.

Example

$ \begin{array}{r} \boxed{1} \ \boxed{9} \\ 2 \overline{) 3 \ 8} \\ \underline{\boxed{2} \ \boxed{0}} \\ \boxed{1} \ \boxed{8} \\ \underline{\boxed{1} \ \boxed{8}} \\ \boxed{0} \end{array} $

24.

$ \begin{array}{r} \square \ \square \\ 2 \overline{) 5 \ 2} \\ \underline{\square \ \square} \\ \square \ \square \\ \underline{\square \ \square} \\ \square \ \square \\ \underline{\square \ \square} \\ \square \end{array} $

25.

$ \begin{array}{r} \square \ \square \\ 2 \overline{) 7 \ 6} \\ \underline{\square \ \square} \\ \square \ \square \\ \underline{\square \ \square} \\ \square \end{array} $

26.

$ \begin{array}{r} \square \ \square \\ 3 \overline{) 4 \ 5} \\ \underline{\square \ \square} \\ \square \ \square \\ \underline{\square \ \square} \\ \square \end{array} $

27.

$ \begin{array}{r} \square \ \square \\ 3 \overline{) 5 \ 7} \\ \underline{\square \ \square} \\ \square \ \square \\ \underline{\square \ \square} \\ \square \end{array} $

28.

$ \begin{array}{r} \square \ \square \\ 3 \overline{) 8 \ 1} \\ \underline{\square \ \square} \\ \square \ \square \\ \underline{\square \ \square} \\ \square \end{array} $

29.

$ \begin{array}{r} \square \ \square \\ 4 \overline{) 5 \ 6} \\ \underline{\square \ \square} \\ \square \ \square \\ \underline{\square \ \square} \\ \square \end{array} $

30.

$ \begin{array}{r} \square \ \square \\ 4 \overline{) 6 \ 8} \\ \underline{\square \ \square} \\ \square \ \square \\ \underline{\square \ \square} \\ \square \end{array} $

Worksheet 2 Real-World Problems: Two-step Problems with Multiplication

Complete.

Example

8

40

32

$8 + 32 = 40$

$4 \times 8 = 32$

1.

15

\square

\square

$\square + \square = \square$

$\square \times \square = \square$

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2.

18

_____ + _____ = _____

_____ × _____ = _____

3.

24

_____ + _____ = _____

_____ × _____ = _____

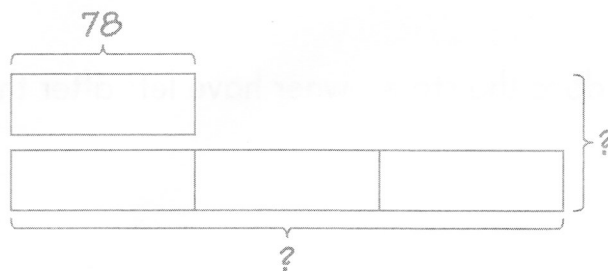
Solve. Use bar models to help you.*Example*

A company employs 78 workers at its factory.

The company opens another factory.

The second factory employs three times as many workers as the first factory.

- a.** How many workers does the second factory employ?



$$3 \times 78 = 234$$

The *second* factory employs 234 workers.

- b.** How many workers do both factories employ?

$$78 + 234 = 312$$

Both factories employ 312 workers.

- 4.** In February, 32 members join a new club.
During the spring, five times as many members join the club.
How many club members are there at the end of spring?

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- 5.** A store owner buys 24 boxes of apples.
Each box contains 8 apples.
During a sale, he sells 63 of his apples.
- a.** How many apples does he have at first?
- b.** How many apples does the store owner have left after the sale?
- 6.** In the auditorium, Brad arranges 35 rows of chairs.
Each row has 7 chairs.
During the performance, 78 chairs are empty.
- a.** How many chairs does Brad arrange?
- b.** How many people attend the performance?

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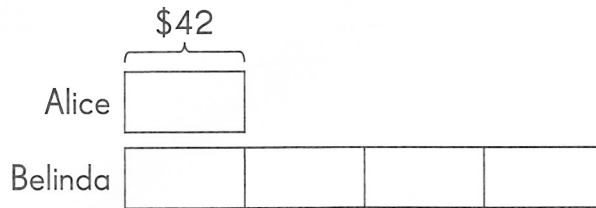
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- 7.** A farmer keeps 27 chicks and 18 ducklings in each coop. She has 9 coops. How many chicks and ducklings does the farmer have altogether?

- 8.** Sally has 56 stamps.
Sarah has three times as many stamps as Sally.
Their brother, Peter, has 45 stamps less than Sarah.
How many stamps does Peter have?

**Write a two-step word problem using the bar models.
Ask a friend to solve the problem.**

Example



Alice has \$42.

Belinda has 4 times as much money as Alice.

a. *How much money does Belinda have?*

$$4 \times \$42 = \$168$$

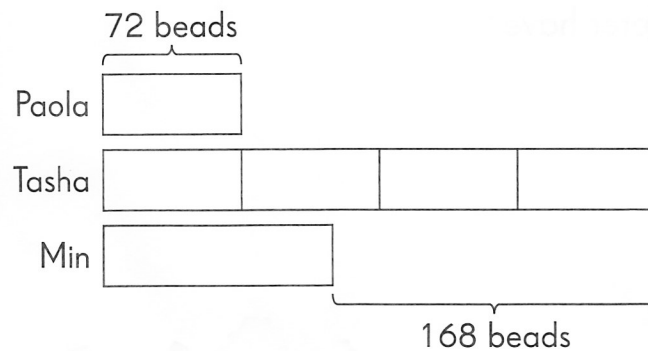
Belinda has \$168.

b. *How much money do Alice and Belinda altogether?*

$$\$42 + \$168 = \$210$$

Alice and Belinda have \$210 altogether.

9.

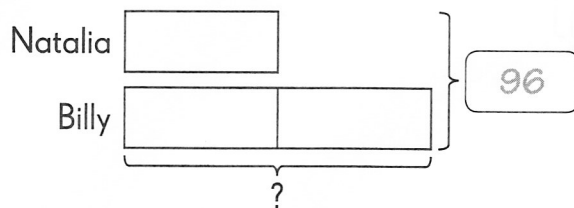


Worksheet 4 Real-World Problems: Two-step Problems with Division

Solve. Use bar models to help you.

Example

Billy has twice as many stamps as Natalia.
They have 96 stamps altogether.
How many stamps does Billy have?



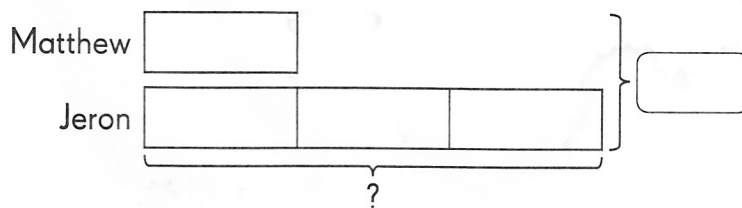
$$\underline{\quad 3 \quad} \text{ units} \rightarrow \underline{\quad 96 \quad}$$

$$1 \text{ unit} \rightarrow \underline{96 \div 3 = 32}$$

$$\underline{\quad 2 \quad} \text{ units} \rightarrow \underline{2 \times 32 = 64}$$

Billy has 64 stamps.

- 1.** Jeron moves three times as many bricks as Matthew.
They move 136 bricks altogether.
How many bricks does Jeron move?



$$\underline{\quad \quad \quad} \text{ units} \rightarrow \underline{\quad \quad \quad}$$

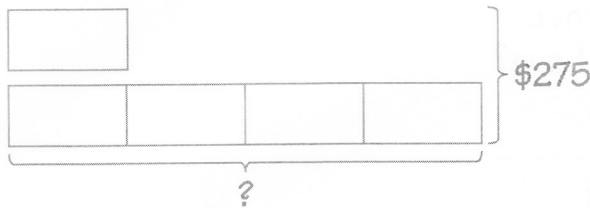
$$1 \text{ unit} \rightarrow \underline{\quad \quad \quad}$$

$$\underline{\quad \quad \quad} \text{ units} \rightarrow \underline{\quad \quad \quad}$$

Jeron moves bricks.

Solve. Use bar models to help you.*Example*

Jessica spends four times as much money as Kathy.
Both of them spend \$275 altogether.
How much money does Jessica spend?



5 units \rightarrow \$275
1 unit \rightarrow $\$275 \div 5 = \55
4 units \rightarrow $4 \times \$55 = \220
Jessica spends \$220.

- 2.** In a math competition, Gabriel completes three times as many problems as Harry.
Both of them complete 72 problems.
How many problems does Gabriel complete?

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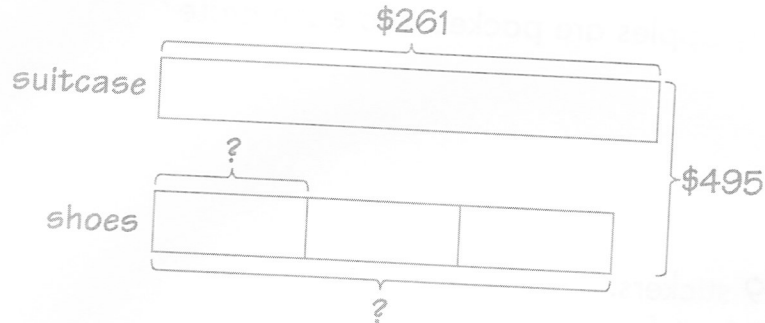
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Solve. Use bar models to help you.

Example

Mrs. Lee buys 3 pairs of shoes and a suitcase for \$495.
The suitcase costs \$261.

- a.** How much do the 3 pairs of shoes cost?



$$\begin{aligned} \$495 - \$261 &= \$234 \\ 3 \text{ pairs of shoes} &\text{ cost } \$234. \end{aligned}$$

- b.** How much does each pair of shoes cost?

$$\begin{aligned} \$234 \div 3 &= \$78 \\ \text{Each pair of shoes} &\text{ costs } \$78. \end{aligned}$$

- 3.** Rosanna buys 8 packages of pencils.
Each package has 24 pencils.
She divides all the pencils equally into 6 boxes.

- a.** How many pencils does Rosanna buy in all?

- b.** How many pencils does each box contain?

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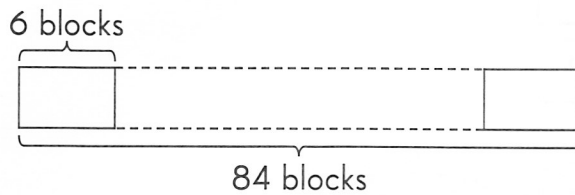
- 4.** Mr. Chan buys 862 apples and oranges.
He keeps all of the 254 oranges in a box. He packs all of the apples equally into 4 crates.
- a.** How many apples does Mr. Chan buy?
- b.** How many apples are packed into each crate?
- 5.** Jane has 189 stickers.
Adam has 251 stickers.
They put all of their stickers equally into 5 boxes.
How many stickers does each box have?
- 6.** Michael has 992 cartons of milk.
He packs the cartons equally into 8 boxes.
He sells each carton for \$3.
How much money does Michael earn for each box of milk?

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**Write a word problem using the bar models.
Then solve the problem.**

Example

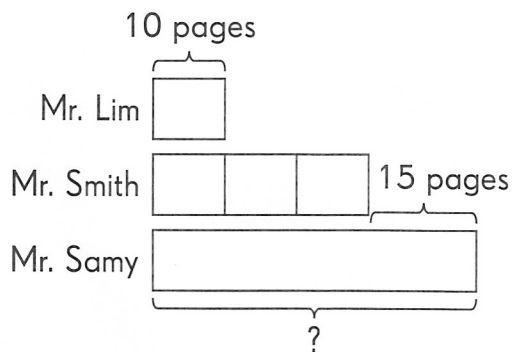


*84 blocks are arranged in groups of 6 blocks each.
How many groups are there?*

$$84 \div 6 = 14$$

There are 14 groups.

7.



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8.

