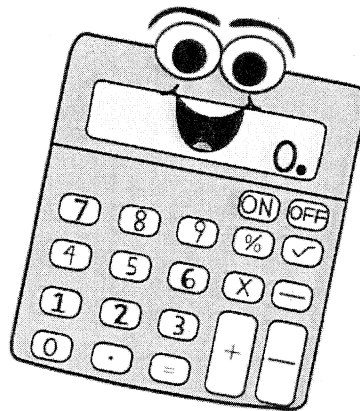
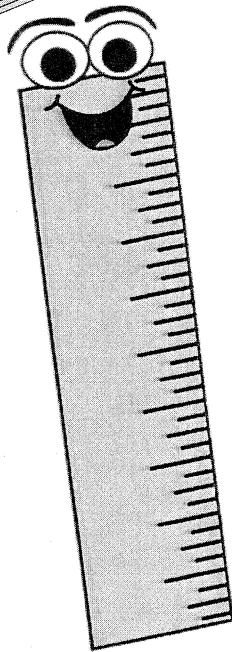
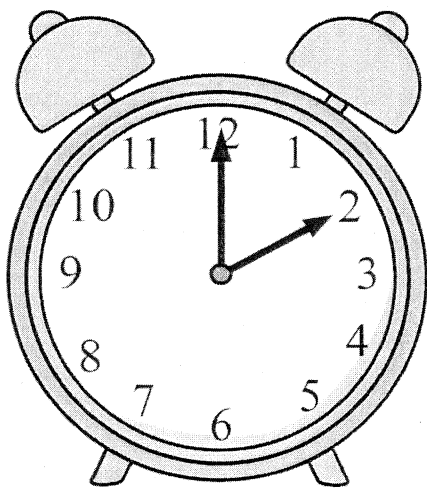


Unit 1

Study Guide

Math Tools, Time, and
Multiplication



Name: _____ Date: _____

EVERYDAY MATHEMATICS—3rd Grade
Unit 1 Review: Math Tools, Time, and Multiplication

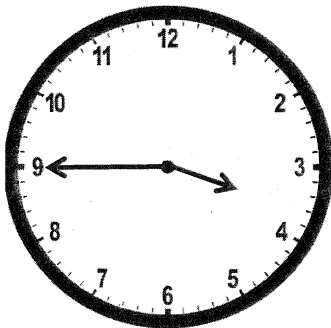
1) Use the number grid.

91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130

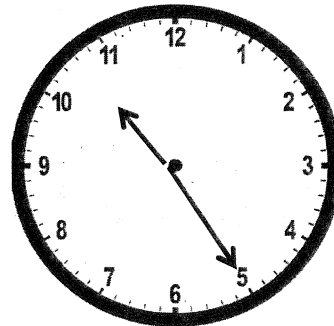
- a. The difference between 92 and 126 is _____.
- b. The difference between 96 and 129 is _____.
- c. Explain how you used the number grid to solve Problem 1a.

2) Write the time shown on each clock.

a.



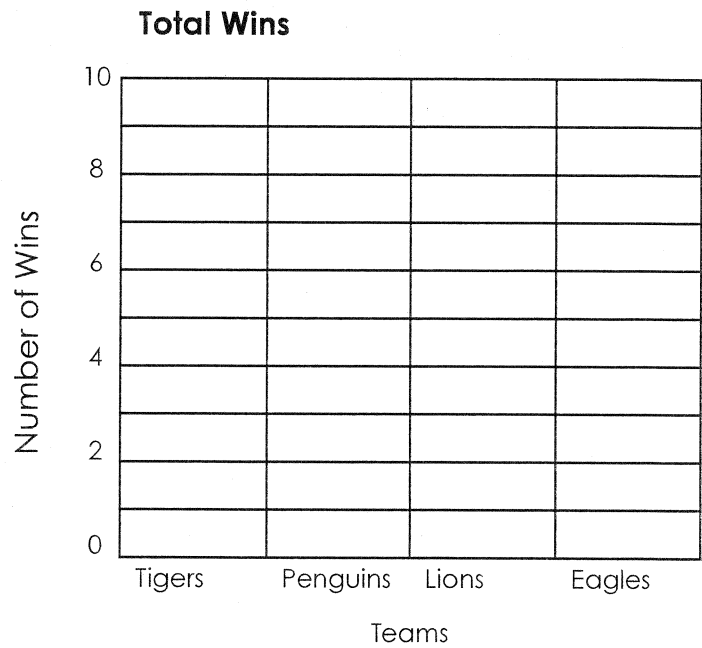
b.



Unit 1 Review (continued)

3) a. Use the tally chart to complete the bar graph.

Teams	Number of Wins
Tigers	### I
Penguins	///
Lions	### IIII
Eagles	### ##



Use the data in the bar graph to answer the questions below.

b. How many wins did all of the teams have in all? _____

c. How many fewer wins did the Tigers have than the Eagles? _____

4) Solve each problem.

a. $6 \times 2 =$ _____

b. $3 \times 3 =$ _____

c. $2 \times 4 =$ _____

d. $10 \times 4 =$ _____

e. $5 \times 3 =$ _____

f. $3 \times 6 =$ _____

g. How did you solve 5×3 ?

Unit 1 Review (continued)

5) For each number story, draw a sketch and write the answer.
Then write a number model to fit the story.

- a. Justin has 3 packs of gum.
In each pack there are 5 pieces of gum.
How many pieces of gum does Justin have in all?

He has _____ pieces of gum.

Number model: _____

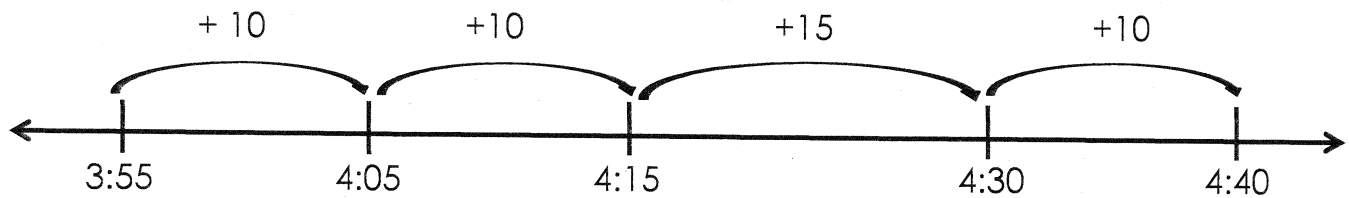
- b. Ava plants 4 rows of flowers with 6 flowers in each row. How many flowers does she plant in all?

She plants _____ flowers.

Number model: _____

Unit 1 Review (continued)

6) Ben starts soccer practice at 3:55 P.M. and finishes at 4:40 P.M. He drew an open number line and used it to find the length of his practice.



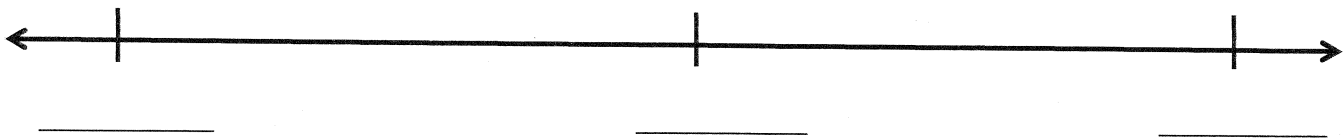
$$10 + 10 + 15 + 10 = 45$$

Explain Ben's work. _____

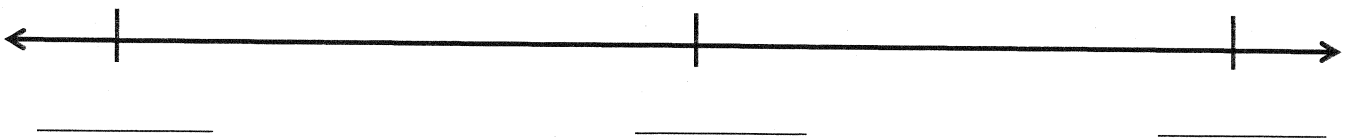
How long is Ben's soccer practice? _____ minutes long

7) Round each number to the nearest 10.
You may use open number lines to help.

a. 41 rounded to the nearest 10 is _____.



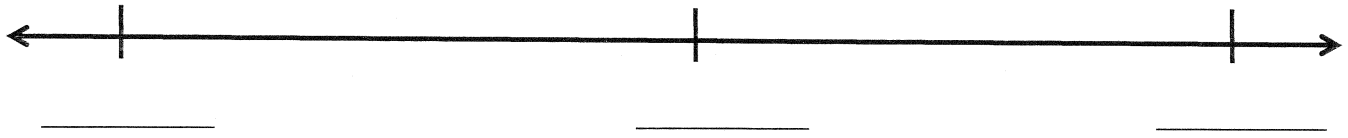
b. 68 rounded to the nearest 10 is _____.



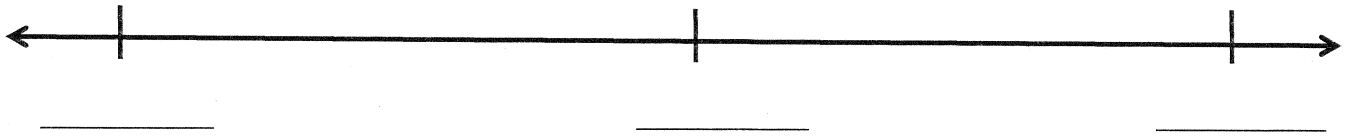
Unit 1 Review (continued)

8) Round each number to the nearest 100.
You may use open number lines to help.

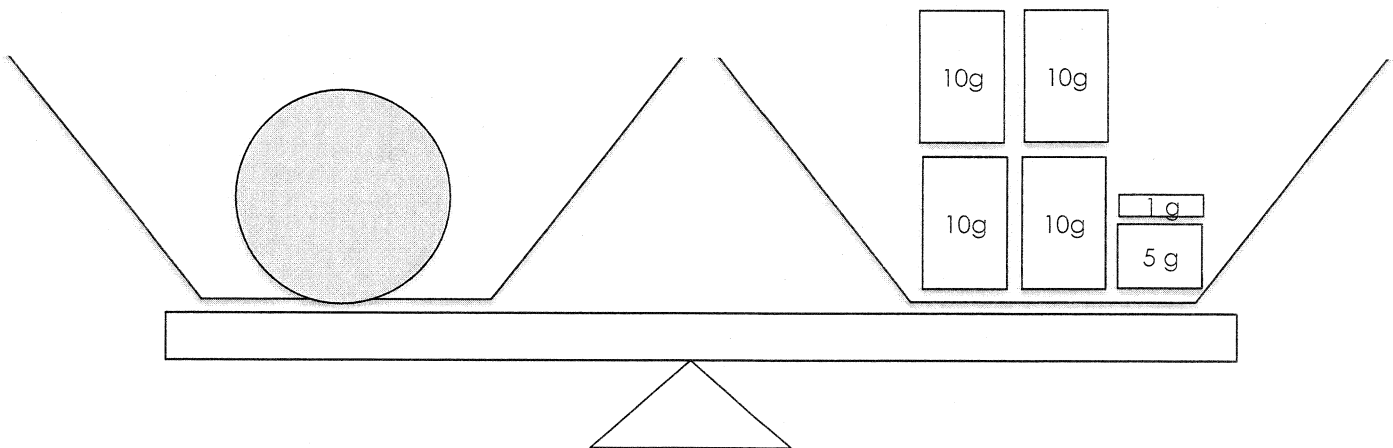
a. 671 rounded to the nearest 100 is _____.



b. 523 rounded to the nearest 100 is _____.



9) Sal used a pan balance and masses to measure the mass of a golf ball. He put the golf ball in one pan and 4 10-gram masses in the other pan. Then he added one 5-gram mass and one 1-gram mass to balance the pans. What is the mass of the golf ball?



Answer: _____ grams

How did you figure out your answer? _____

Name: _____ Date: _____

EVERYDAY MATHEMATICS—3rd Grade
Unit 1 Challenge Review

1) Matthew counts 18 toy cars and arranges them in different arrays.

a. Sketch all the possible arrays Matthew could make with the toy cars.

b. Write multiplication number models for each of the arrays.

c. Could Matthew make an array that has 5 rows? _____

Explain. _____

2) Sophia and Hector played *Number-Grid Difference*.

The object of the game is to have the lower sum of 5 scores.

Hector picked 2 and 4 and made the number 24.

Sophia picked 7 and 4. What number should Sophia make? _____

Explain your answer. _____

Unit 1 Challenge Review (continued)

3) Solve. You may use a clock or an open number line to help you. Show your work.

Olivia starts summer camp at 8:45 A.M.

She finishes at 2:15 P.M.

How many hours and minutes does Olivia spend at summer camp?

Olivia spends _____ hours and _____ minutes at summer camp.

4) Noah is working on his 10s and 5s facts.

He knows most of his 10s facts, but he has trouble with his 5s facts.

You can help him.

a. Solve.

$$4 \times 10 = \underline{\hspace{2cm}}$$

4 X 10 means 4 equal groups of 10.

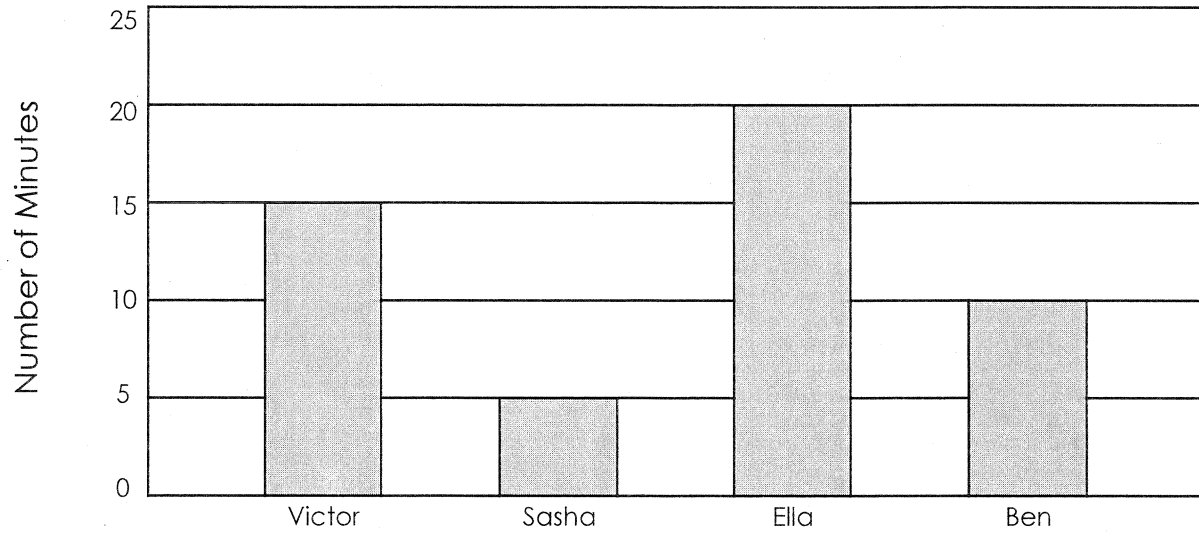
b. Explain how Noah can use his answer to 4 X 10 to figure out what 4 X 5 would be.

c. Explain another way that Noah could solve 4 X 5.

Name: _____ Date: _____

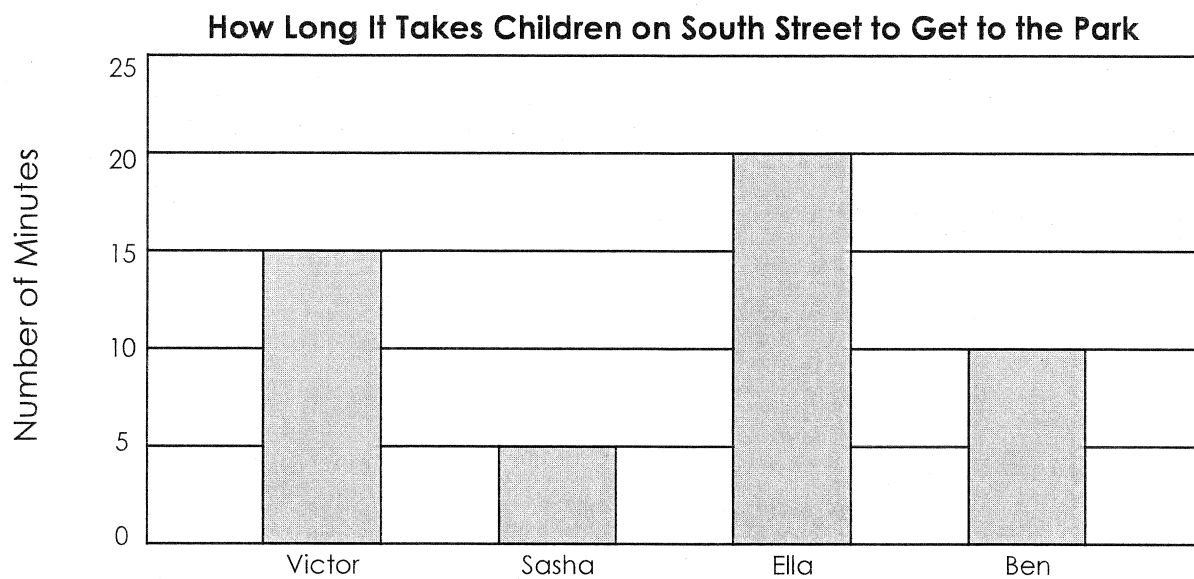
EVERYDAY MATHEMATICS—3rd Grade
Unit 1 Open Response Review
Going to the Park

How Long It Takes Children on South Street to Get to the Park



1) Look carefully at the title, labels, and bars on the graph. Write at least 5 things you know from the graph.

Unit 1 Open Response Review (continued)



2) Victor leaves for the park at 3:00 P.M. Sasha leaves 5 minutes later.

a. Who gets to the park first? _____

b. Explain how you figured it out.

Name: *ANSWER KEY* Date: _____

EVERYDAY MATHEMATICS—3rd Grade
Unit 1 Review: Math Tools, Time, and Multiplication

1) Use the number grid.

91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130

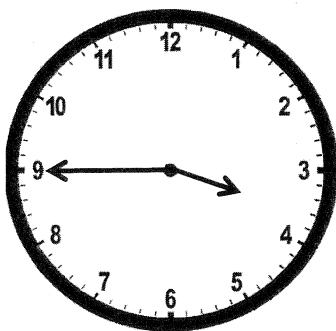
- a. The difference between 92 and 126 is 34.
- b. The difference between 96 and 129 is 33.
- c. Explain how you used the number grid to solve Problem 1a.

Possible answer: I counted by ones from 92 to 106 and got 14.

Then I counted by tens from 106 to 126 and got 20. So the
difference is 34.

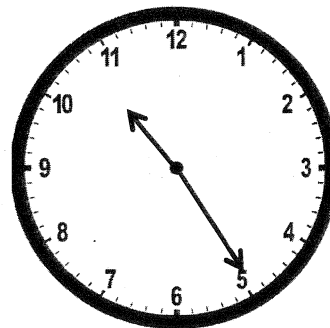
2) Write the time shown on each clock.

a.



3:45

b.



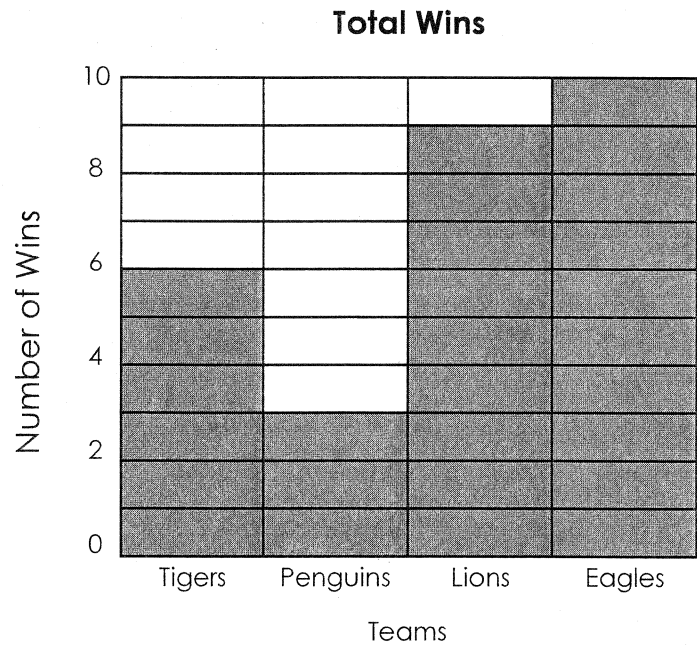
10:25

Unit 1 Review (continued)

ANSWER KEY

3) a. Use the tally chart to complete the bar graph.

Teams	Number of Wins
Tigers	### I
Penguins	///
Lions	### ////
Eagles	### ###



Use the data in the bar graph to answer the questions below.

b. How many wins did all of the teams have in all? 28 wins

c. How many fewer wins did the Tigers have than the Eagles? 4 wins

4) Solve each problem.

a. $6 \times 2 = \underline{12}$

b. $3 \times 3 = \underline{9}$

c. $2 \times 4 = \underline{8}$

d. $10 \times 4 = \underline{40}$

e. $5 \times 3 = \underline{15}$

f. $3 \times 6 = \underline{18}$

g. How did you solve 5×3 ?

Answers will vary.

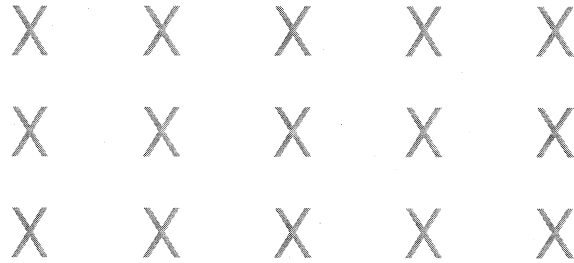
Possible answers: I drew three rows of 5 dots. Three 5s is 15. I skip

counted by 5s three times. I added 5 three times.

Unit 1 Review (continued)***ANSWER KEY***

5) For each number story, draw a sketch and write the answer.
Then write a number model to fit the story.

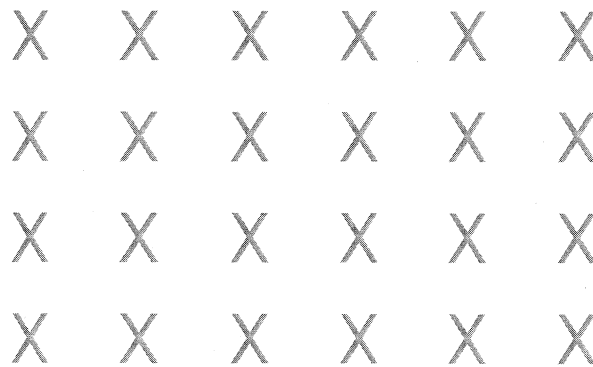
- a. Justin has 3 packs of gum.
In each pack there are 5 pieces of gum.
How many pieces of gum does Justin have in all?



He has 15 pieces of gum.

Number model: $5 + 5 + 5 = 15$ or $3 \times 5 = 15$ or $5 \times 3 = 15$

- b. Ava plants 4 rows of flowers with 6 flowers in each row. How many flowers does she plant in all?

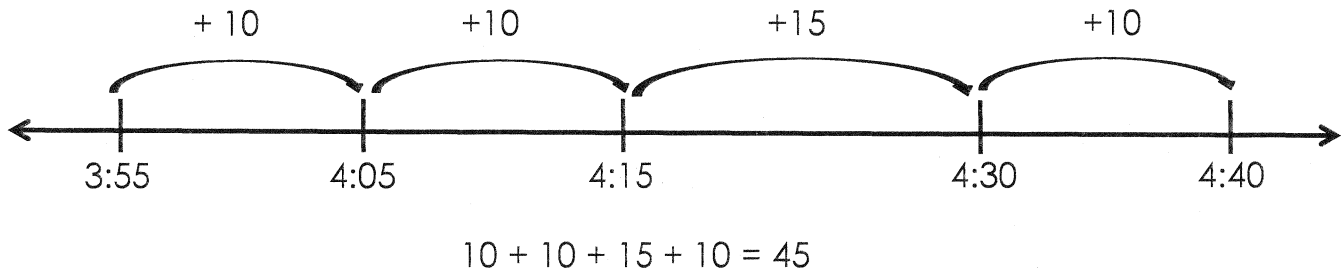


She plants 24 flowers.

Number model: $6 + 6 + 6 + 6 = 24$ or $4 \times 6 = 24$ or $6 \times 4 = 24$

Unit 1 Review (continued)***ANSWER KEY***

6) Ben starts soccer practice at 3:55 P.M. and finishes at 4:40 P.M. He drew an open number line and used it to find the length of his practice.



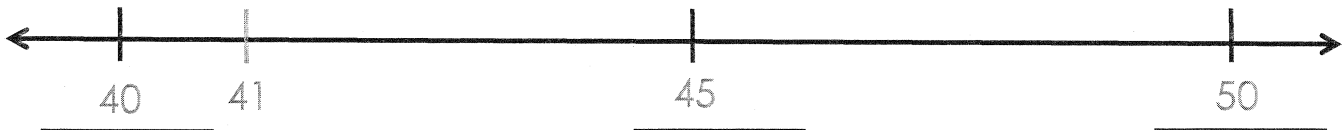
Explain Ben's work. _____

Possible answer: Ben counted up 10 minutes from 3:55 to 4:05, 10 minutes from 4:05 to 4:15, 15 minutes from 4:15 to 4:30, and 10 minutes from 4:30 to 4:40. He added up the minutes and got 45 minutes.

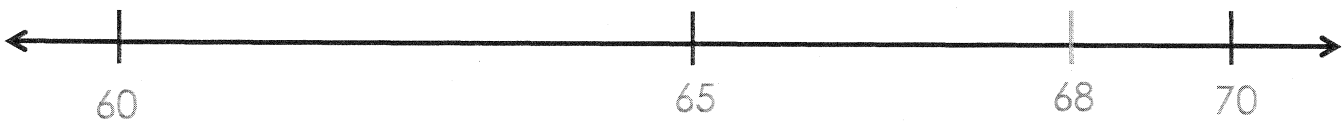
How long is Ben's soccer practice? 45 minutes long

7) Round each number to the nearest 10.
You may use open number lines to help.

a. 41 rounded to the nearest 10 is 40.



b. 68 rounded to the nearest 10 is 70.



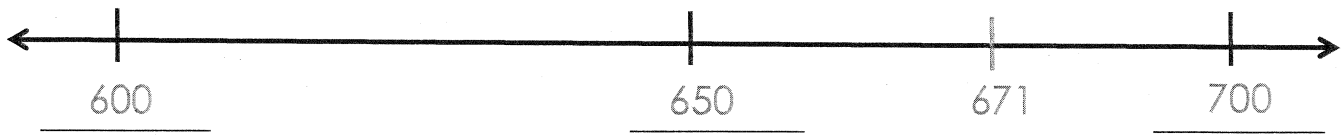
Unit 1 Review (continued)

ANSWER KEY

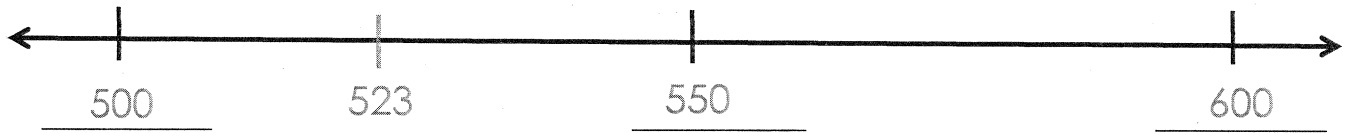
8) Round each number to the nearest 100.

You may use open number lines to help.

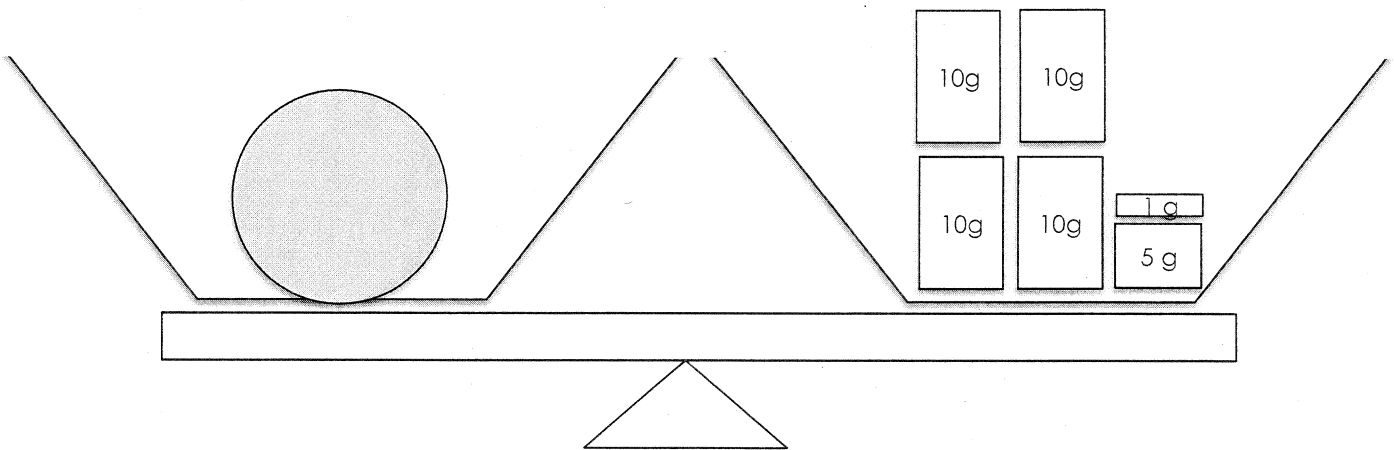
a. 671 rounded to the nearest 100 is 700.



b. 523 rounded to the nearest 100 is 500.



9) Sal used a pan balance and masses to measure the mass of a golf ball. He put the golf ball in one pan and 4 10-gram masses in the other pan. Then he added one 5-gram mass and one 1-gram mass to balance the pans. What is the mass of the golf ball?



Answer: 46 grams

How did you figure out your answer? _____

I added $10 + 10 + 10 + 5 + 1$ and got 46 grams.

Name: *ANSWER KEY*

Date: _____

EVERYDAY MATHEMATICS—3rd Grade Unit 1 Challenge Review

1) Matthew counts 18 toy cars and arranges them in different arrays.

a. Sketch all the possible arrays Matthew could make with the toy cars.

X X X X X X

X X X X X X

X X X X X X

$$3 \times 6 = 18$$

X X X X X X X X X

X X X X X X X X X

$$2 \times 9 = 18$$

X X X X X X X X X X X X X X X X

$$1 \times 18 = 18$$

b. Write multiplication number models for each of the arrays.

c. Could Matthew make an array that has 5 rows? no

Explain. _____

He could put 5 toy cars in each row, but then there would be 3

left over.

2) Sophia and Hector played *Number-Grid Difference*.

The object of the game is to have the lower sum of 5 scores.

Hector picked 2 and 4 and made the number 24.

Sophia picked 7 and 4. What number should Sophia make? 47

Explain your answer. She should make 47 because the difference

between 24 and 47 is less than the difference between 24 and 74.

Unit 1 Challenge Review (continued) *ANSWER KEY*

3) Solve. You may use a clock or an open number line to help you. Show your work.

Olivia starts summer camp at 8:45 A.M.

She finishes at 2:15 P.M.

How many hours and minutes does Olivia spend at summer camp?

Olivia spends 5 hours and 30 minutes at summer camp.

4) Noah is working on his 10s and 5s facts.

He knows most of his 10s facts, but he has trouble with his 5s facts.

You can help him.

a. Solve.

$$4 \times 10 = \underline{40}$$

4 X 10 means 4 equal groups of 10.

b. Explain how Noah can use his answer to 4 X 10 to figure out what 4 X 5 would be.

Possible answer: 4 groups of 10 is 40, 5 is half of 10, so 4 groups of 5 is half of 40,

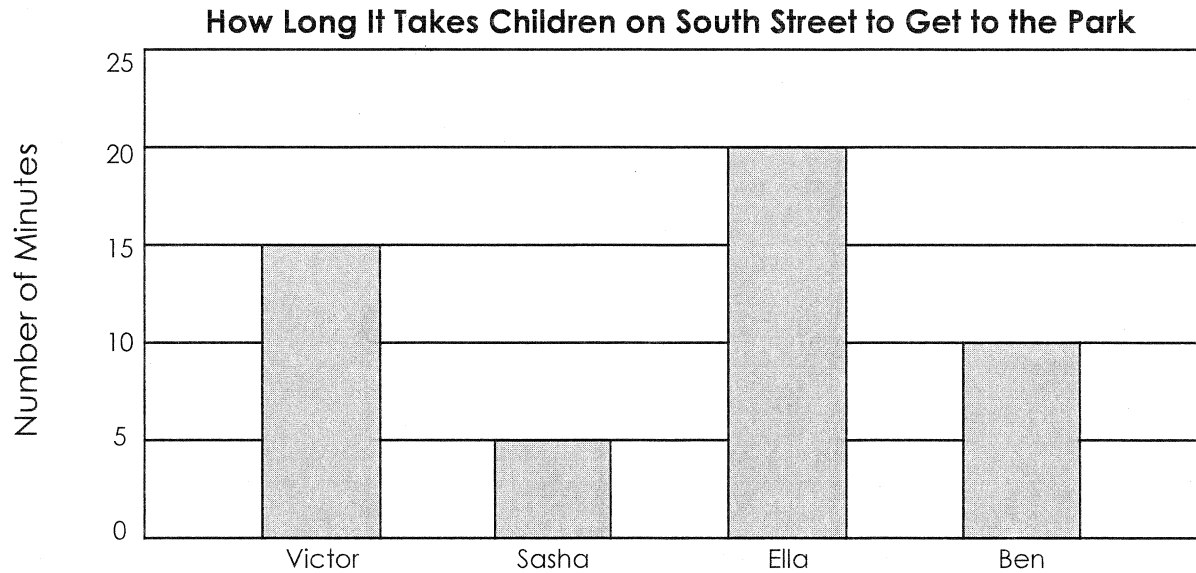
or 20.

c. Explain another way that Noah could solve 4 X 5.

Possible answer: He could skip count by 5s four times. He could also add 5 four

times.

EVERYDAY MATHEMATICS—3rd Grade
Unit 1 Open Response Review
Going to the Park

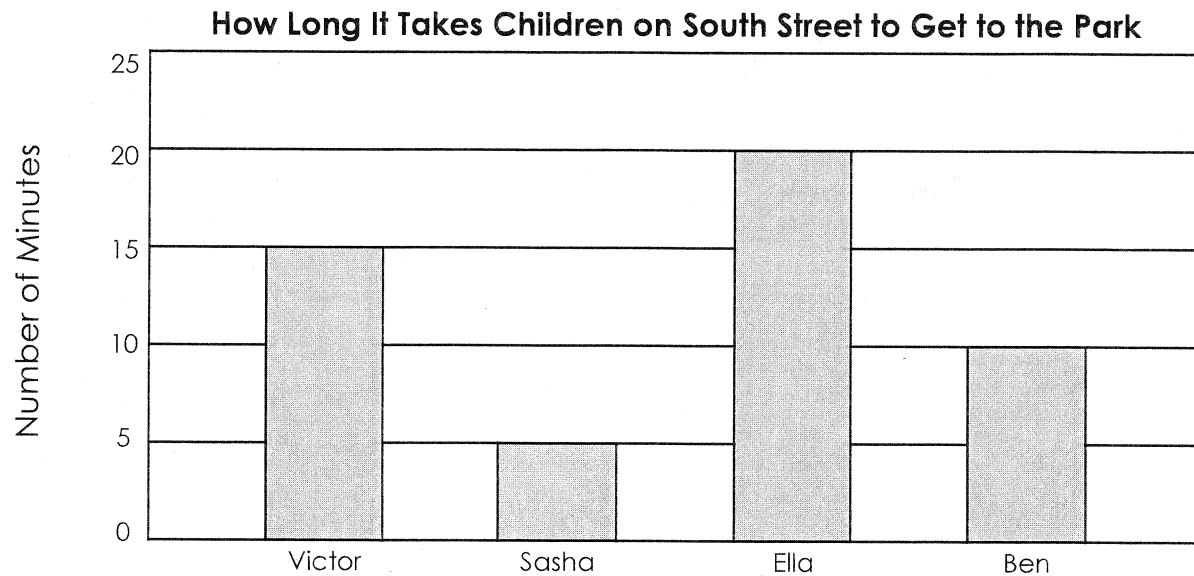


1) Look carefully at the title, labels, and bars on the graph. Write at least 5 things you know from the graph.

Possible answers:

- It takes Victor 15 minutes to get to the park.
- It takes Sasha 5 minutes to get to the park.
- It takes Ella 20 minutes to get to the park.
- It takes Ben 10 minutes to get to the park.
- Ella takes the most time.
- Sasha takes the least time.
- Sasha lives the closest to the park.
- Ella lives the furthest from the park.

Unit 1 Open Response Review (continued) *ANSWER KEY*



2) Victor leaves for the park at 3:00 P.M. Sasha leaves 5 minutes later.

a. Who gets to the park first? Sasha

b. Explain how you figured it out.

Victor
Start 3:00
+ 15 minutes
End 3:15

Sasha
Start 3:05
+ 5 minutes
End 3:10

First, I figured out what time Victor got to the park. He left at 3:00 and got there 15 minutes later. That's 3:15. Then, I added 5 minutes to 3:00 to find Sasha's start time. It's 3:05. I added 5 minutes to 3:05, which is 3:10. Sasha got to the park 5 minutes before Victor.

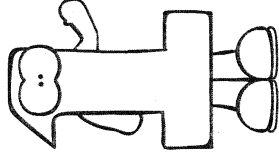
Name: _____

Test Date: _____

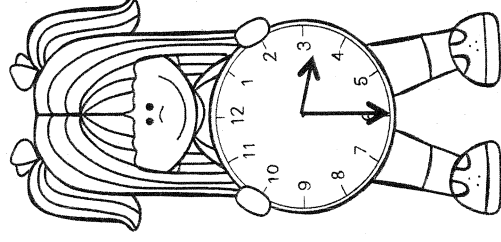
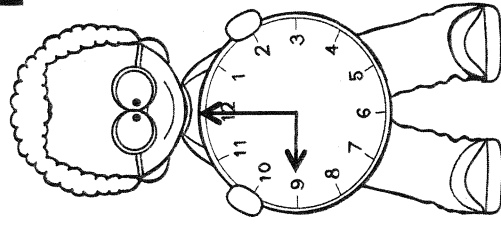
Grade 3

Everyday Math:

Unit



Math Tools, Time, and Multiplication



Study Guide

Unit Vocabulary:

array, bar graph, close-but-easier numbers, column, data, difference, division, division symbol, elapsed time, equal grouping, equal groups, equal shares, equal sharing, essay, estimate, fact family, factors, Fact Triangle, gram, kilogram, length of day, mass, masses, mathematical model, multiplication, multiplication symbol, number grid, open number line, pan balance, precise, product, Quick Looks, round, row, strategy, weight, zero.

Lesson 1b:

How do you add and subtract multi-digit numbers?

Use the number grid.

81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

- The difference between 84 and 116 is _____.
- The difference between 98 and 111 is _____.
- Explain how you used the number grid to solve problem 1b.

Lesson 1.2:

How do we use the Student Reference Book and play *Number-Grid Difference*?

Becky and Aaron played *Number-Grid Difference*.

The object of the game is to have the lower sum of 5 scores.

Becky picked 2 and 5 and made the number 25.

Aaron picked 7 and 5. What number should Aaron make?

Explain your answer. _____

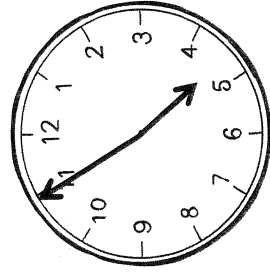
Lesson 1.3:

What are the tools we use in math, and how are they used to solve math problems?

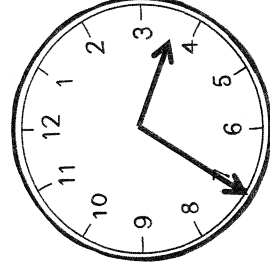
Write the time shown on each clock.

You may use your toolkit clocks to help you.

a.



b.



Lesson 1.4:

How do you round numbers to the nearest 10 or 100?

Round each number to the nearest 10. You may use open number lines to help.

- a. 79 rounded to the nearest 10 is _____.



- b. 53 rounded to the nearest 10 is _____.



Round each number to the nearest 100. You may use open number lines to help.

- a. 763 rounded to the nearest 100 is _____.



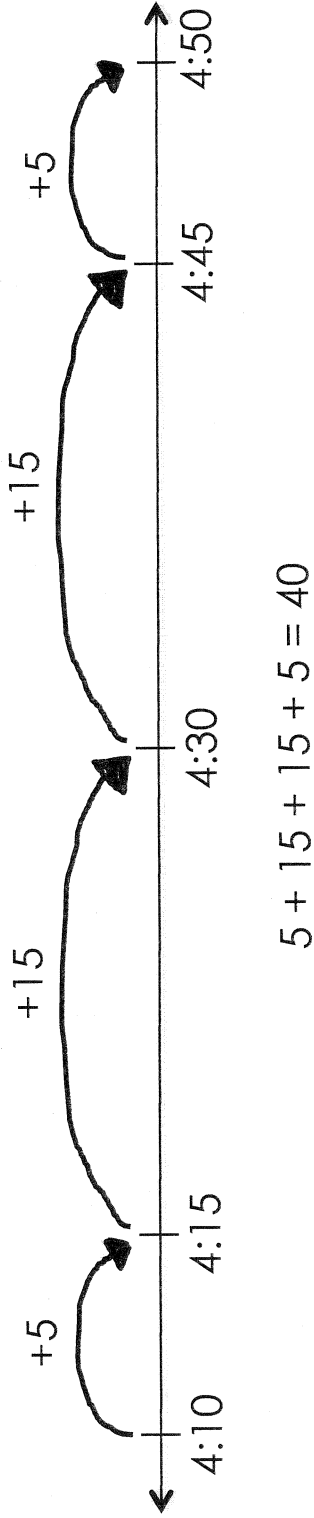
- b. 669 rounded to the nearest 100 is _____.



Lesson 1.5:

How do you tell time to the nearest minute and calculate elapsed time?

Devon starts baseball practice at 4:10 P.M. and finishes at 3:50 P.M. He drew an open number line and used it to find the length of his practice.



Explain Devon's work.

How long was Devon's baseball practice? _____ minutes long

Lesson 1.6:

What strategies do you use to calculate elapsed time?

Solve. You may use your toolkit clock or an open number line to help you.
Show your work.

Lenna starts art camp at 10:45 A.M.
He finishes at 2:15 P.M.

How many hours and minutes does Lenna spend at camp?

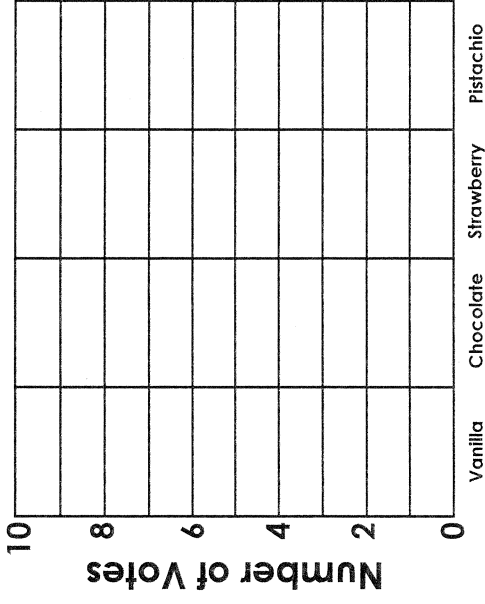
Lenna spends ____ hours and ____ minutes at camp.

Lesson 1.7:

How do you represent and interpret data on a scaled bar graph?

- a. Use the tally chart to complete the bar graph.

Favorite Flavors	Number of votes
Vanilla	I
Chocolate	
Strawberry	
Pistachio	



Use the data in the bar graph to answer the questions below.

- b. How many votes were there in all? _____
- c. How many fewer liked pistachio than chocolate? _____
- d. Write at least two things you know from the graph.

Lesson 1.8:

What strategies do you use to solve multiplication number stories?

For the number story, draw a sketch and write the answer.
Then write a number model to fit the story.

Blake makes 7 rows of chairs.

In each row he puts 5 chairs.

How many chairs does Blake use in all?

He uses _____ chairs.

Number model: _____

Lesson 1.9:

What strategies do you use to solve division number stories?

Draw a picture to help you solve the number story. Record your answers.

Abby has 24 apples. She puts 6 apples in each basket.

How many baskets does she use?

_____ baskets

Lesson I.10:

How do you improve your fluency with multiplication facts?

Solve each problem.

a. $2 \times 6 =$ _____

b. $2 \times 4 =$ _____

c. $5 \times 4 =$ _____

d. $3 \times 5 =$ _____

e. $10 \times 5 =$ _____

f. $4 \times 10 =$ _____

g. How did you solve 3×5 ?

Lesson I.11:

What strategies do you use to calculate elapsed time?

Find the elapsed time. Use the open number line to help.

The class started recess at 2:25 P.M. They finished at 2:40 P.M. How long was recess?

Recess was _____ minutes long.



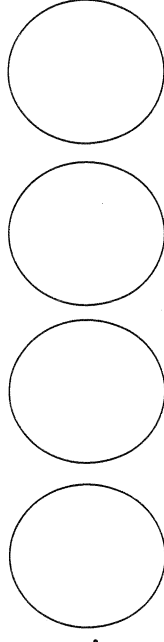
Lesson 1.12:

Exploration A: How do you compare the masses of objects?
Fill in the blanks with vocabulary words from the lesson.

1. _____ is the measure of the amount of matter in an object is.
2. _____ is the measure of how heavy something is.
3. A tool used to compare & measure the masses of objects is a _____.

Exploration B: How do you divide multiple wholes into equal shares?
Solve the problem below. You may use the pancakes sketches to help you.

You roll a 4 for number of pancakes.
You roll a 3 for number of people sharing the pancakes.
How many pancakes will each person get?



Answer: _____
(unit)

Exploration C: How do you create equal groups?

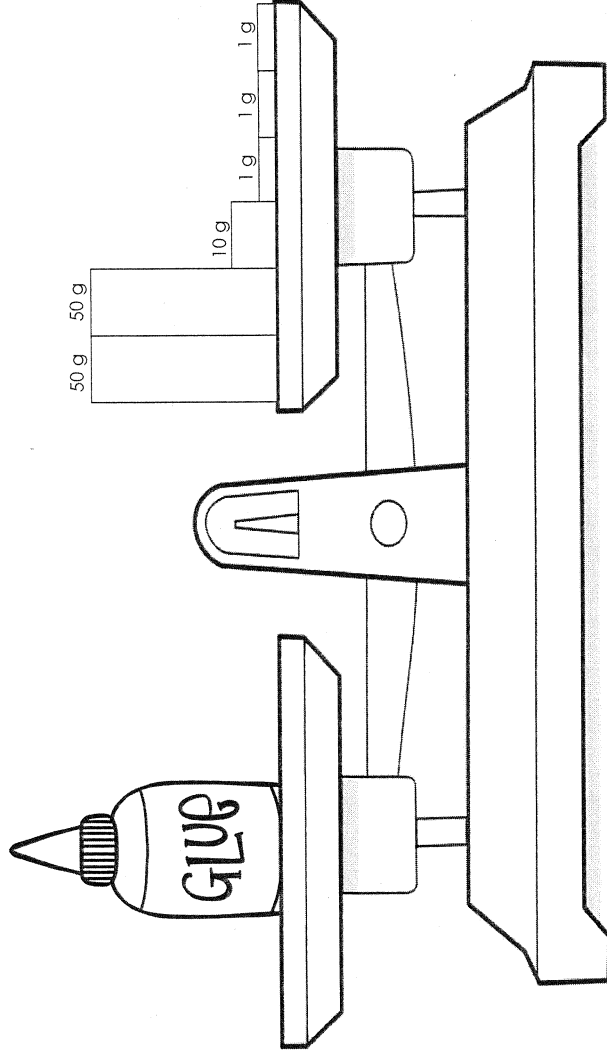
You roll a 5 for number of nests.
You roll a 3 for how many eggs in each nest.
Draw a sketch of the nests and eggs.
Write a number model to show how many eggs in all.

Number model: _____

Lesson 1.13:

How do you estimate and measure the masses of objects?

Kelly used a pan balance and masses to measure the mass of a bottle of glue. She put the bottle of glue in one pan and two 50-gram masses in the other pan. Then she added one 10-gram mass and three 1-gram masses to balance the pans. What is the mass of the glue bottle?



Answer: _____ grams

How did you figure out your answer? _____

ANSWER KEY



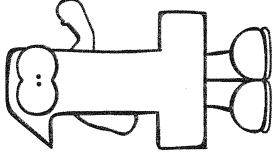
Name: ANSWER KEY

Test Date: - - -

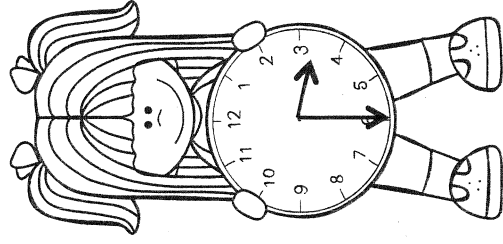
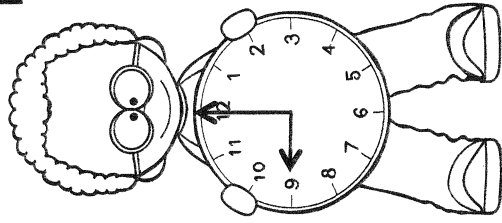
Grade 3

Everyday Math:

Unit 1



Math Tools, Time, and Multiplication



Study Guide

Unit Vocabulary:

array, bar graph, close-but-easier numbers, column, data, difference, division, division symbol, elapsed time, equal grouping, equal groups, equal shares, equal sharing, essay, estimate, fact family, factors, Fact Triangle, gram, kilogram, length of day, mass, masses, mathematical model, multiplication, multiplication symbol, number grid, open number line, pan balance, precise, product, Quick Looks, round, row, strategy, weight, zero.

Lesson 1.1:

How do you add and subtract multi-digit numbers?

Use the number grid.

81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

- The difference between 84 and 117 is 33.
- The difference between 88 and 114 is 26.
- Explain how you used the number grid to solve problem 1b.

Sample Answer: I counted by 1s from 88 to 94 and got 6. Then

I counted by 10s from 94 to 114 and got 20. So the difference

Lesson 1.2:

How do we use the Student Reference Book and play *Number-Grid Difference*?

Becky and Aaron played *Number-Grid Difference*.

The object of the game is to have the lower sum of 5 scores.

Becky picked 2 and 5 and made the number 25.

Aaron picked 7 and 5. What number should Aaron make?

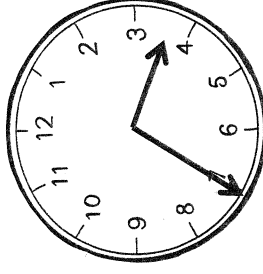
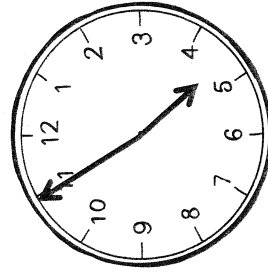
Explain your answer. Sample Answer: He should make 57 because the difference between 25 and 57 is less than the difference between 25 and 75.

Lesson 1.3:

What are the tools we use in math, and how are they used to solve math problems?

Write the time shown on each clock.

You may use your toolkit clocks to help you.



4:55

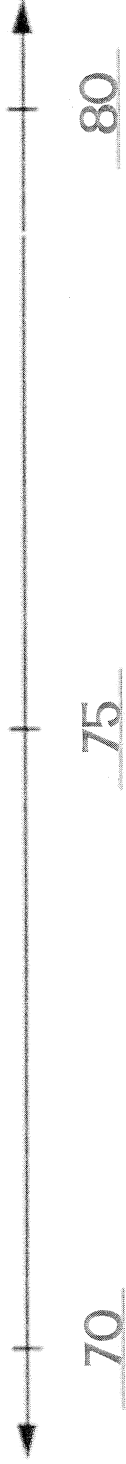
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Lesson 1.4:

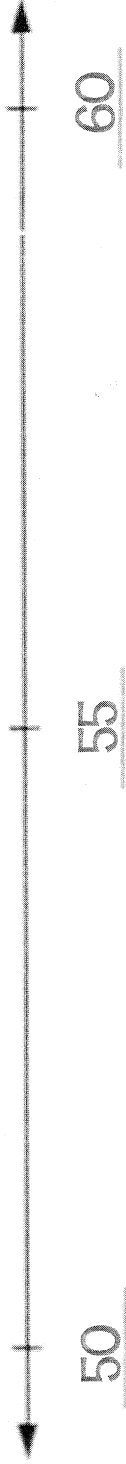
How do you round numbers to the nearest 10 or 100?

Round each number to the nearest 10. You may use open number lines to help.

- a. 79 rounded to the nearest 10 is 80.



- b. 53 rounded to the nearest 10 is 50.



Round each number to the nearest 100. You may use open number lines to help.

- a. 763 rounded to the nearest 100 is 800.



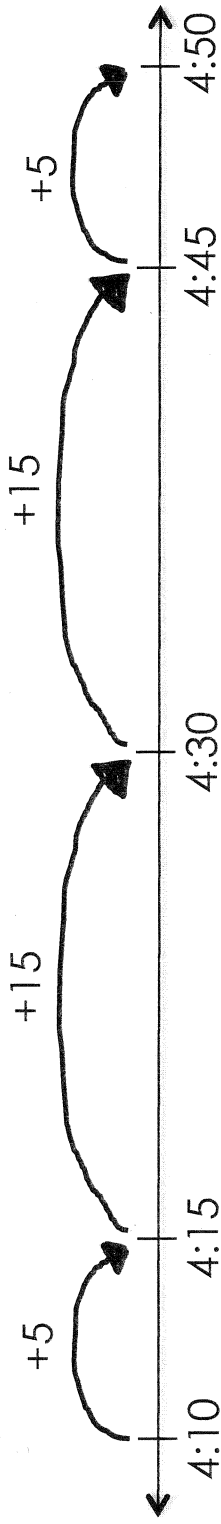
- b. 669 rounded to the nearest 100 is 700.



Lesson 1.5:

How do you tell time to the nearest minute and calculate elapsed time?

Devon starts baseball practice at 4:10 P.M. and finishes at 4:50 P.M. He drew an open number line and used it to find the length of his practice.



$$5 + 15 + 15 + 5 = 40$$

Explain Devon's work. Devon counted up 5 minutes from 4:10 to 4:15, 15 minutes from 4:15 to 4:30, 15 minutes from 4:30-4:45, and 5 minutes from 4:45 to 4:50. He added up the minutes and got 40.

How long was Devon's baseball practice? 40 minutes long

Lesson 1.6:

What strategies do you use to calculate elapsed time?

Solve. You may use your toolkit clock or an open number line to help you.
Show your work.

Lenna starts art camp at 10:45 A.M.
He finishes at 2:15 P.M.

How many hours and minutes does Lenna spend at camp?

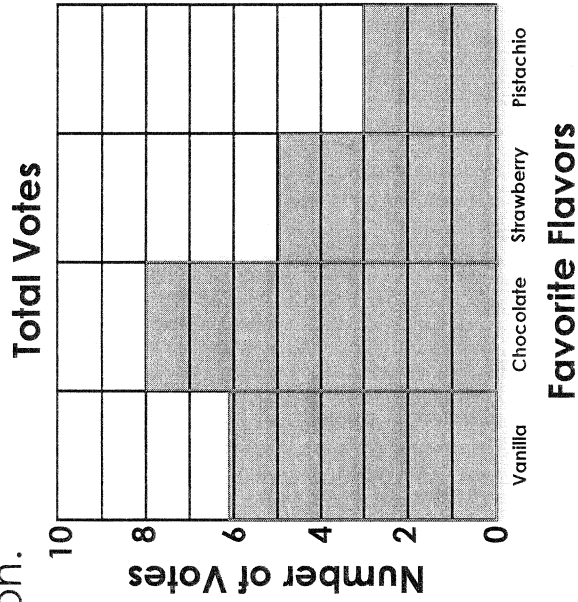
Lenna spends 3 hours and 30 minutes at camp.

Lesson 1.7:

How do you represent and interpret data on a scaled bar graph?

- a. Use the tally chart to complete the bar graph.

Favorite Flavors	Number of votes
Vanilla	I
Chocolate	
Strawberry	
Pistachio	



Use the data in the bar graph to answer the questions below.

- b. How many votes were there in all? 22
- c. How many fewer liked pistachio than chocolate? 5
- d. Write at least two things you know from the graph.

Sample Answers:

- * There were six votes for vanilla.
- * Most of the votes were for chocolate.
- * There was one more vote for strawberry than there was for pistachio.

Lesson 1.8:

What strategies do you use to solve multiplication number stories?

For the number story, draw a sketch and write the answer.
Then write a number model to fit the story.

Blake makes 7 rows of chairs.

In each row he puts 5 chairs.

How many chairs does Blake use in all?

He uses 35 chairs.

Number model: $5 \times 7 = 35$ OR $7 \times 5 = 35$ OR $5 + 5 + 5 + 5 + 5 = 35$

Lesson 1.9:

What strategies do you use to solve division number stories?

Draw a picture to help you solve the number story. Record your answers.

Abby has 24 apples. She puts 6 apples in each basket.

How many baskets does she use?

4 baskets

Lesson 1.10:

How do you improve your fluency with multiplication facts?

Solve each problem.

a. $2 \times 6 = \underline{12}$

b. $2 \times 4 = \underline{8}$

c. $5 \times 4 = \underline{20}$

d. $3 \times 5 = \underline{15}$

e. $10 \times 5 = \underline{50}$

f. $4 \times 10 = \underline{40}$

g. How did you solve 3×5 ?

Sample answers: I skip counted by 5s three times OR I added 5

three times.

Lesson 1.11:

What strategies do you use to calculate elapsed time?

Find the elapsed time. Use the open number line to help.

The class started recess at 2:25 P.M. They finished at 2:40 P.M. How long was recess?

Recess was 15 minutes long.



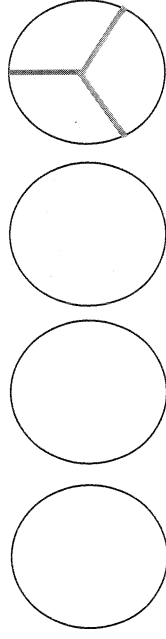
Lesson 1.12:

Exploration A: How do you compare the masses of objects?
Fill in the blanks with vocabulary words from the lesson.

1. Mass is the measure of the amount of matter in an object is.
2. Weight is the measure of how heavy something is.
3. A tool used to compare & measure the masses of objects is a pan balance.

Exploration B: How do you divide multiple wholes into equal shares?
Solve the problem below. You may use the pancakes sketches to help you.

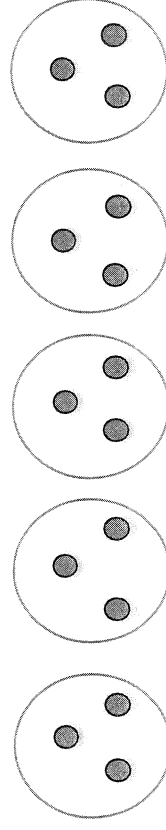
You roll a 4 for number of pancakes.
You roll a 3 for number of people sharing the pancakes.
How many pancakes will each person get?



Answer: 1 and 1-third pancake
(unit)

Exploration C: How do you create equal groups?

You roll a 5 for number of nests.
You roll a 3 for how many eggs in each nest.
Draw a sketch of the nests and eggs.
Write a number model to show how many eggs in all.

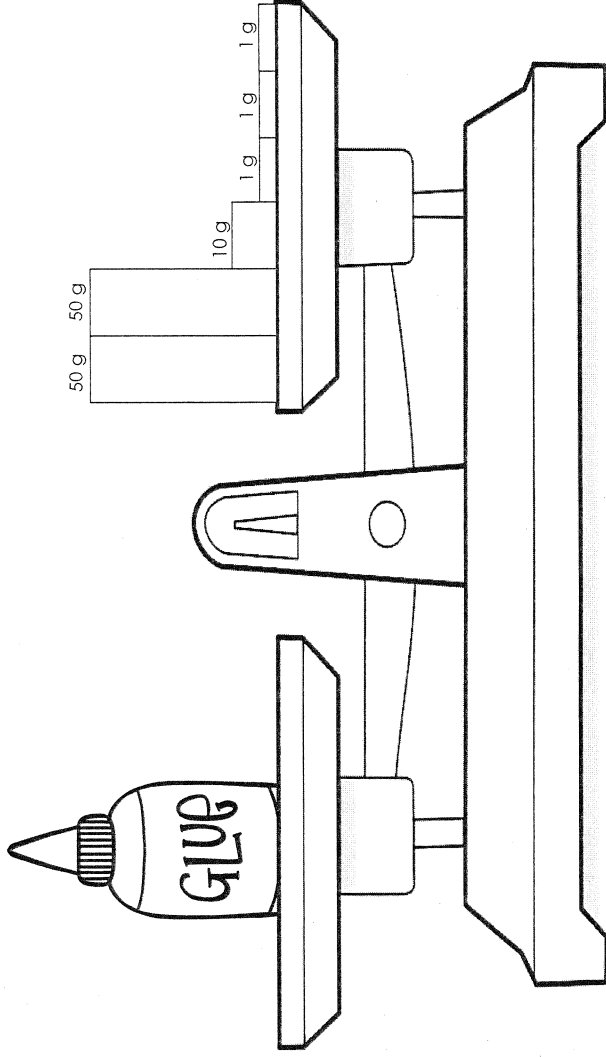


Number model: $5 \times 3 = 15$

Lesson 1.13:

How do you estimate and measure the masses of objects?

Kelly used a pan balance and masses to measure the mass of a bottle of glue. She put the bottle of glue in one pan and two 50-gram masses in the other pan. Then she added one 10-gram mass and three 1-gram masses to balance the pans. What is the mass of the glue bottle?



Answer: 13 grams

How did you figure out your answer? I added $50 + 50 + 10 + 3$ and got 113.