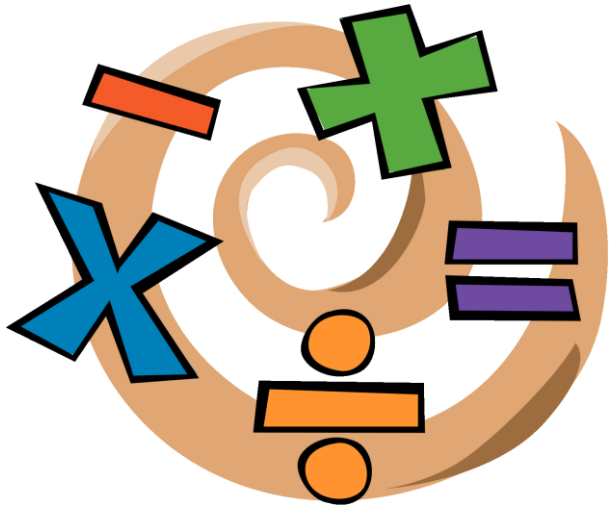
UNITED ARAB EMIRATES
MINISTRY OF EDUCATION
Al Dahfra
Al Selaa School (KG & cycle 1)

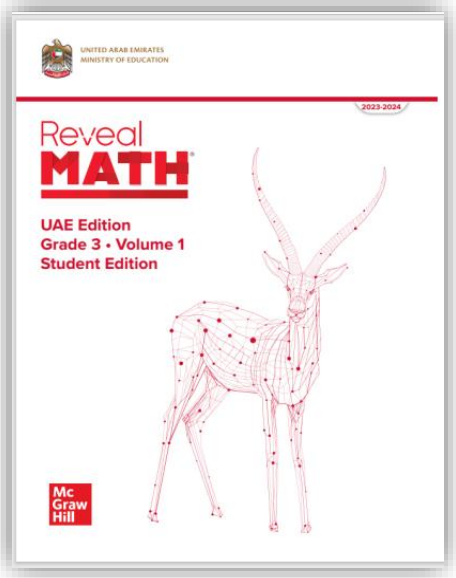
الإمارات العربية المتحدة
وزارة التربية والتعليم
الظفرة
روضة ومدرسة السلع

EoT_T3_Coverage_Grade 3

هيكل مادة الرياضيات للصف الثالث

الفصل الدراسي الثالث





Mrs : Farida Alhammadi

School Principal :

Bakheeta Almansoori

الأسئلة الموضوعية
(الاختيار من متعدد)
15 سؤال
كل سؤال 4 درجات

الأسئلة المقالية (الأسئلة الكتابية)
5 أسئلة
الدرجات من 6-10 درجات

Academic Year العام الدراسي	2023/2024
Term الفصل	3
Subject المادة	Mathematics/Reveal الرياضيات/ريفيل
Grade الصف	3
Stream المسار	General العام
Number of MCQ عدد الأسئلة الموضوعية	15
Marks of MCQ درجة الأسئلة الموضوعية	4
Number of FRQ عدد الأسئلة المقالية	5
Marks per FRQ الدرجات للأسئلة المقالية	(6-10)
Type of All Questions نوع كافة الأسئلة	MCQ/ الأسئلة الموضوعية FRQ/ الأسئلة المقالية
Maximum Overall Grade الدرجة القصوى الممكنة	100
Exam Duration - مدة الامتحان	120 minutes
Mode of Implementation - طريقة التطبيق	Paper-Based
Calculator الآلة الحاسبة	Not Allowed غير مسموحة

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Maximum Overall Grade الدرجة القصوى الممكنة	100
Exam Duration - مدة الامتحان	120 minutes

Question* السؤال*		Lesson Name** اسم الدرس **	Reference(s) in the Student Book (English Version) المرجع في كتاب الطالب (النسخة الانجليزية)	
			Example/Exercise مثال/تمرين	Page الصفحة
MCQ - الأسئلة الموضوعية	1	Patterns with Multiples of 10	(1-9) 9	125 150
	2	More Multiplication Patterns	(1-7) (8-13)	129 130
	3	Understand the Associative Property	(5-9)	134
	4	Understand Perimeter	(1-6) 6	159 180
	5	Determine Perimeter of Figures	(1-9)	163
	6	Determine an Unknown Side Length	(1-3) (4-7)	167 168
	7	Solve Problems Involving Measurement	(1-4)	177
	8	Measure Liquid Volume	(1-5)	189
	9	Measure Mass	(1-4)	197
	10	Tell Time to the Nearest Minute	(1-8)	205

Exam Duration - مدة الامتحان	120 minutes
Mode of Implementation - طريقة التطبيق	Paper-Based
Calculator	Not Allowed
الآلة الحاسبة	غير مسموحة

الأسئلة الموضوعية

(الاختيار من متعدد)

15 سؤال

كل سؤال 4 درجات

10	Tell Time to the Nearest Minute	(1-8)	205
		(9-13)	206
11	Understand Scaled Picture Graphs	(1-3)	213
		(4-5)	214
12	Measure to Halves or Fourths of an Inch	(1-7)	225
		20	235
13	Describe and Classify Polygons	(1-3)	243
		15	261
14	Describe and Classify Polygons	(4-9)	243
		(11,12)	261
15	Describe Quadrilaterals	(1-6)	247
		(7-9)	248
		(7,9)	260

الأسئلة المقالية - FRQ	16	Two-Step Problems Involving Multiplication and Division	Work Together	138
			(1-5)	139
			(6-10)	140
	17	Explain the Reasonableness of a Solution	(1-4)	147
			(5-8)	148
	18	a) Solve Problems Involving Area and Perimeter	(1-8)	171
		b) Solve Problems Involving Measurement	(8-11)	178
	19	Understand Scaled Bar Graphs	(1,2)	217
			(3-5)	218
	20	Show Measurement Data on a Line Plot	(1-9)	231
			19	235

* Questions might appear in a different order in the actual exam, or on the exam paper.

* قد تظهر الأسئلة بترتيب مختلف في الامتحان الفعلي، أو على ورقة الامتحان .

** As it appears in the textbook,and LMS.

** كما وردت في كتاب الطالب وLMS .

الأسئلة المقالية (الأسئلة الكتابية)

5 أسئلة

الدرجات من 6-10 درجات

1	Patterns with Multiples of 10	(1-9)	125
		9	150

Page :125

How can you use place value to multiply?

1. 5 x 40

5 x 4 tens = 20 tens

So, 5 x 40 = 200

2. 6 x 50

6 x 5 tens = 30 tens

So, 6 x 50 = 300

3. 7 x 90

7 x 9 tens = 63 tens

So, 7 x 90 = 630

4. 8 x 30

8 x 3 tens = 24 tens

So, 8 x 30 = 240

5. Nia uses 50 blocks to create a sculpture. Use place value to find how many bloc s she uses to create 7 sculptures.

7 x 50 = 7 x 5 x 10 = 350

How can you decompose the multiple of 10 to multiply?

6. 4 x 90

4 x 9 x 10

36 x 10 = 360

7. 3 x 70

3 x 7 x 10

21 x 10 = 210

8. 6 x 40

6 x 4 x 10

24 x 10 = 240

9. 8 x 50

8 x 5 x 10

40 x 10 = 400

1	Patterns with Multiples of 10	(1-9)	125
		9	150

Page :150

9. Which of the following shows a correct way to decompose 60 × 5? (Lesson 10-1)

A. 10 × 6 × 5

B. 10 × 6 + 5

C. 10 + 6 × 5

D. 10 + 6 + 5

5 X 60

5 X 6 X 10

2	More Multiplication Patterns	(1-7)	129
		(8-13)	130

Page :129

1. What patterns do you see with the multiples of 1 in the multiplication fact table?

any number x 1 get same number

×	0	1	2	3	4	5	6
0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6
2	0	2	4	6	8	10	12
3	0	3	6	9	12	15	18
4	0	4	8	12	16	20	24
5	0	5	10	15	20	25	30
6	0	6	12	18	24	30	36

2. Keller notices that the numbers in the 2s column are the same as the numbers in the 2s row. How can you explain this pattern?

Commutative property

$2 \times 4 = 8$, $4 \times 2 = 8$

3. Use the multiplication fact table. What pattern do you notice with the multiples of 6?

all products is even

0, 6, 12, 18, 24 ...

2	More Multiplication Patterns	(1-7)	129
		(8-13)	130

Page :129

4. Use the multiplication fact table. What pattern do you notice with the multiples of 5?

5, 10, 15, 20 . . .

odd ends of 5 and even ends of zero

5. How do multiples of 10 relate to multiples of 5? Explain.

multiples of 10 doubles of multiples of 5

6. **Error Analysis** Eva says that the product of 8 × 6 is 49. Do you agree? How can you use patterns to explain your thinking?

No

4 > 8 x 6 = 4 x 6 + 4 x 6

24 + 24 = 48.

7. Use the multiplication fact table. What patterns do you see with the products of 0?

all products zero

2	More Multiplication Patterns	(1-7)	129
		(8-13)	130

Page :130

even

0, 2, 4, 6, 8

odd

1, 3, 5, 7, 9

8. How can you use patterns to predict the product?

a. Circle the multiplication facts that will have an even product.

4 × 5 = 20 ~~5 × 7 = 35~~ 3 × 6 = 18 5 × 2 = 10 ~~1 × 9 = 9~~ 7 × 8 = 56 ~~7 × 4 = 8~~ 10 × 6 = 60

b. Explain why the products are even.

ones digit is even

9. Are the products of 6s facts double the products of 2s facts? Explain.

No 6 double of 3

Fill in the blank with *always*, *sometimes*, or *never*.

10. Products of 6s facts are always double the products of 3s facts.
11. Products of 7s facts are sometimes even.
12. Products of 4s facts are never odd.
13. **Extend Your Thinking** How can you explain the pattern shown?

number multiply by self

×	0	1	2	3	4	5	6
0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6
2	0	2	4	6	8	10	12
3	0	3	6	9	12	15	18
4	0	4	8	12	16	20	24
5	0	5	10	15	20	25	30
6	0	6	12	18	24	30	36

1x1 2x2 3x3

3	Understand the Associative Property	(5-9)	134

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How can you solve the problem two ways?

5. Mrs. Dean makes 2 sandwiches for her 3 children 4 days a week. How many sandwiches does Mrs. Dean make each week?

$2 \times 3 \times 4 = 6 \times 4 = 24$

6. Jose paints 2 paintings in 1 day each week. How many paintings does he paint in 7 weeks?

$2 \times 1 \times 7 = 2 \times 7 = 14$

7. Candice works 3 hours in 1 day. She works 3 days each week. How many hours does she work in 6 weeks? in 9 weeks?

$3 \times 3 \times 6 = 54$ | $3 \times 3 \times 9 = 81$

8. **Error Analysis** Korena's work is shown. Do you agree with her solution? Explain.

NO

$5 \times 1 \times 4$

$10 \times 4 = 40$

$5 \times 2 \times 4 = ?$

$5 \times 2 = 10$ $\quad 2 \times 4 = 8$

$10 \times 8 = 80$

$5 \times 2 \times 4 = 80$

9. **Extend Your Thinking** You can group the factors 4 x 7 x 10 two different ways. Explain which is more efficient for you.

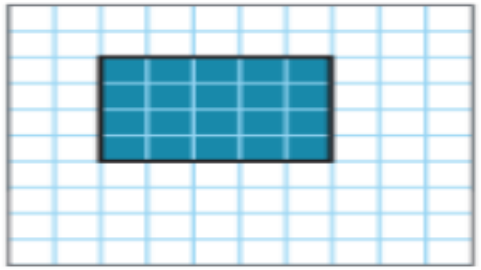
$4 \times 7 \times 10 = 28 \times 10 = 280$ | $4 \times 7 \times 10 = 4 \times 70 = 280$

4	Understand Perimeter	(1-6)	159
		6	180

Page :159

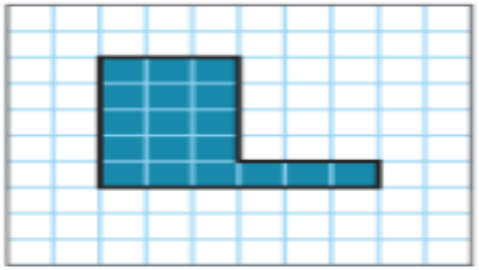
What is the perimeter of the figure?

1.



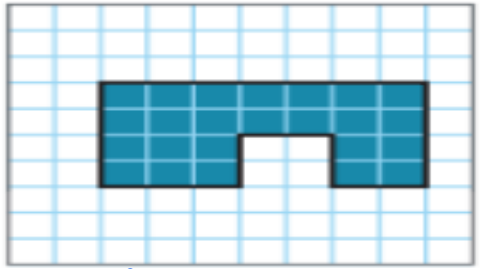
18 units

2.



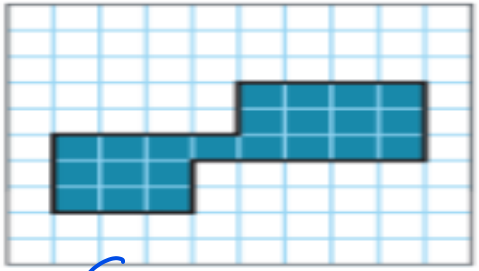
22 units

3.



26 units

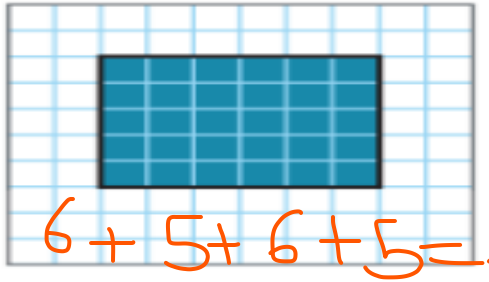
4.



26 units

What equation can you write to represent the perimeter?

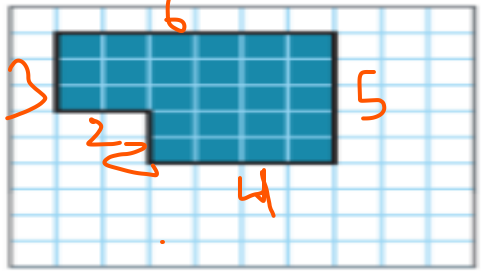
5.



$6+5+6+5=22$

22

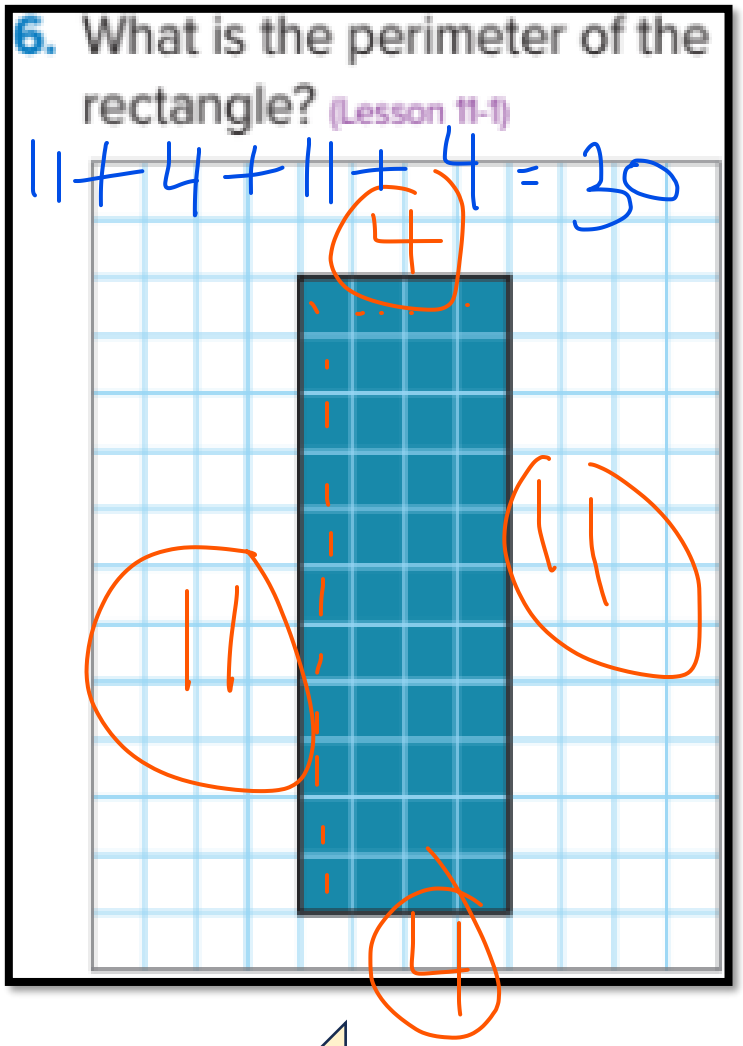
6.



$6+5+4+2+2+3=22$

6. What is the perimeter of the rectangle? (Lesson 11-1)

$11+4+11+4=30$



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5	Determine Perimeter of Figures	(1-9)	163

Page :163

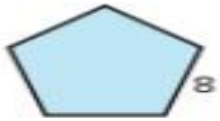
What is the perimeter of the figure? Complete the equation.

1.

17 + 10 + 17 + 10 = 54

____ feet

2.



8 + 8 + 8 + 8 + 8 = 40

5 × 8 = 40

____ inches

5+5+5+5=20

5X4=20

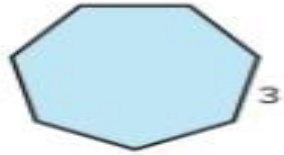
What is the perimeter of the figure? Include the unit.

3.

4.

6+7+9+6=28

5.



3 X 7 = 21

3+3+3+3+3+3+3 =21

22+10+22+10

=64

6.

7.

20+20+35

=75

8.

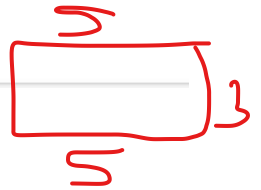
10 X 4 = 40

10+10+10+10 = 40

9. How can you determine the perimeter of a rectangle that is 3 cm wide and 5 cm long in two different ways ? Which strategy do you think is more efficien

3+5+3+5=16

or 3+5=8 [8+8=16]



6	Determine an Unknown Side Length	(1-3)	167
		(4-7)	168

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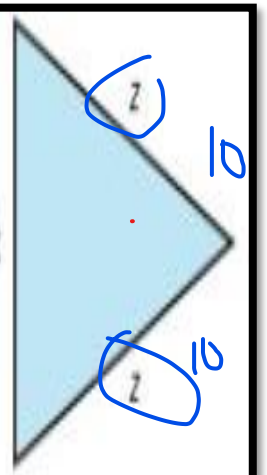
4. A triangular flag has 2 sides of equal length. The perimeter of the flag is 28 feet. What ar the unknown lengths?



1) $28 - 8 = 20$

2) $20 \div 2 = 10$

10

10

5. Leo's painting is in the shape of a rectangle. Two sides are 8 inches long. The perimeter of the painting is 20 inches. What is the length of the other two sides? Show your thinking.

$P = 20$

1) $8 + 8 = 16$

2) $20 - 16 = 4$

3) $4 \div 2 = 2$

8, 2, 2, 8

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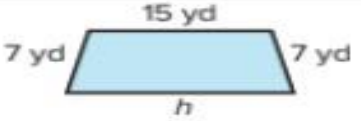
1. The perimeter is 46 yards.

$46 = 15 + 7 + 7 + h$

$46 = 29 + h$

$46 - 29 = h$

$46 - 29 = 17$



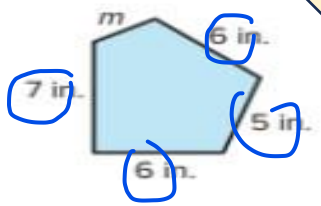
The unknown side length is 17 yards.

2. The perimeter is 27 inches.

$27 = 7 + 6 + 5 + 6 + m$

$27 = 24 + m$

$27 - 24 = 3$

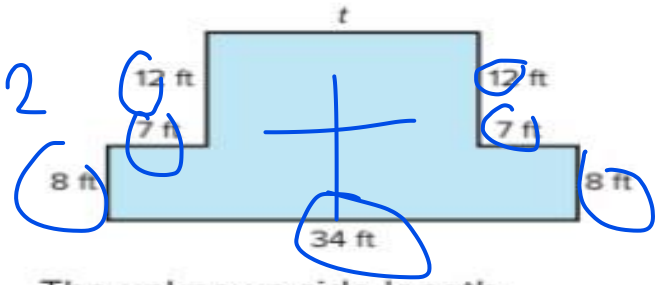


The unknown side length is 3 inches.

3. The perimeter is 108 feet.

$34 + 8 + 7 + 12 + 12 + 7 + 8 = 88$

$108 - 88 = 20$



The unknown side length is 20.

6	Determine an Unknown Side Length	(1-3)	167
		(4-7)	168

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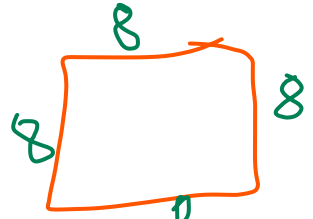
6. Error Analysis Margo has a square rug with a perimeter of 32 feet. She says she does not have enough information to find the side lengths of the rug. How can you help Margo understand how to find the side length ?

NO , $32 \div 4 = 8$

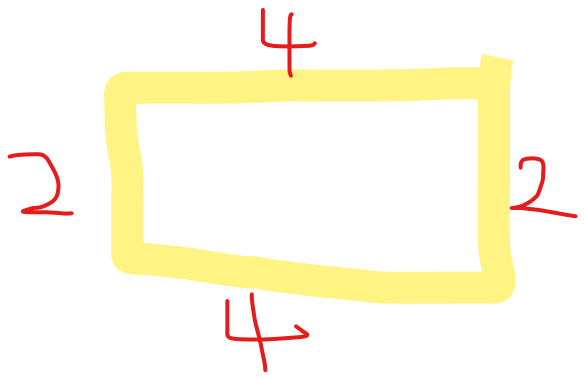
$P = 32$



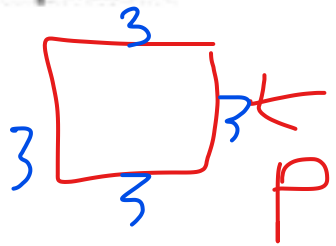
all sides equal

7. Extend Your Thinking Bryan draws a rectangle and a square. One side of the rectangle is 2 inches. Another side is twice as long. The rectangle and the square have the same perimeter. What are the side lengths of the square? Explain.

double



$P = 4 + 2 + 4 + 2 = 12$



$P = 12$

$12 \div 4 = 3$

7	Solve Problems Involving Measurement	(1-4)	177

Page :177

What equation describes the situation?

1. 49 feet of rope cut into pieces 7 feet long

$49 \div 7 = 7$

2. 9 strips of paper each 6 inches long

$9 \times 6 = 54$

3. 4 miles each day for 8 days

$4 \times 8 = 32$

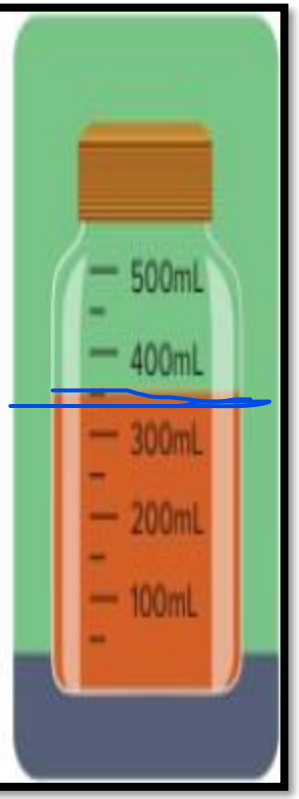
4. 10 yards of fabric cut into 5 pieces

$10 \div 5 = 2$

8	Measure Liquid Volume	(1-5)	189

5. **Error Analysis** Alex pours soup into a jar. He says he has 400 milliliters of soup. How do you respond to Alex?

No, 350 mL



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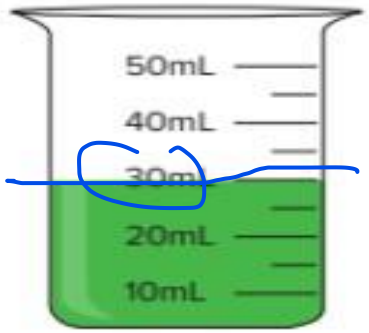
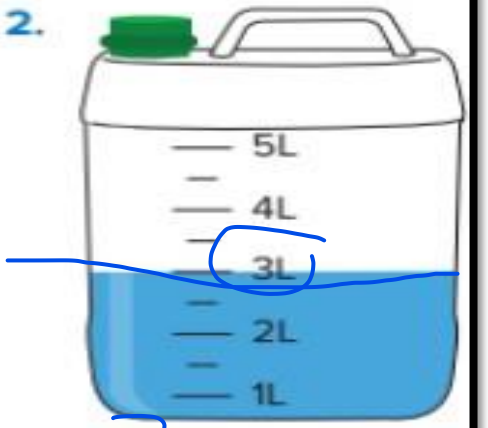
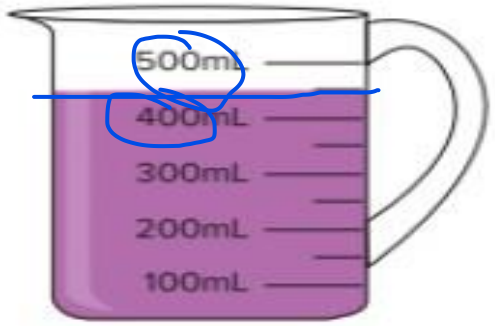
What is the volume of the liquid in the container?

1. 

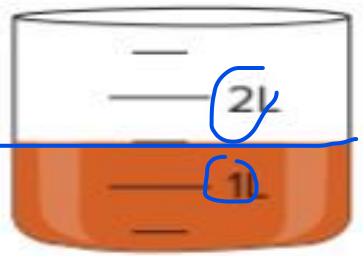
30 milliliters

2. 

3 liters

3. 

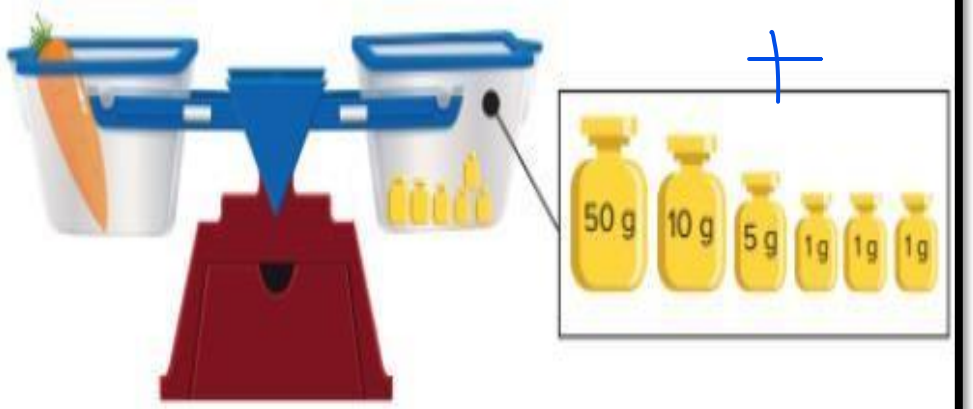
450 milliliters

4. 

1 1/2 liters 1.5

9	Measure Mass	(1-4)	197

4. What is the mass of the carrot?



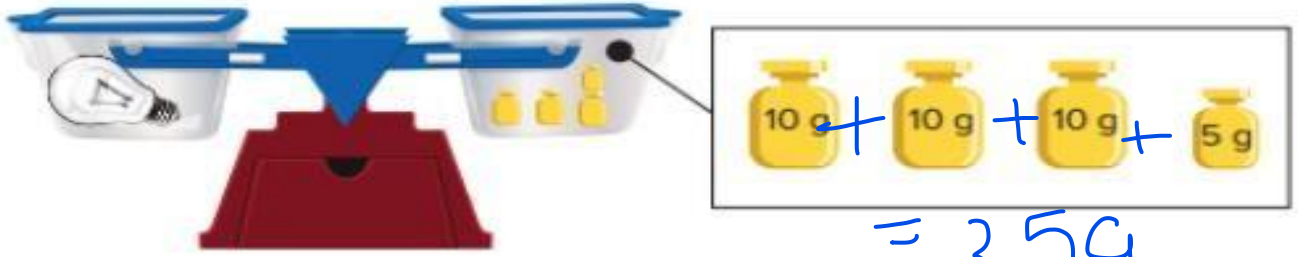
50 + 10 + 5 + 1 + 1 + 1 = 68 g

Page :197

1. What is the mass of the brick?

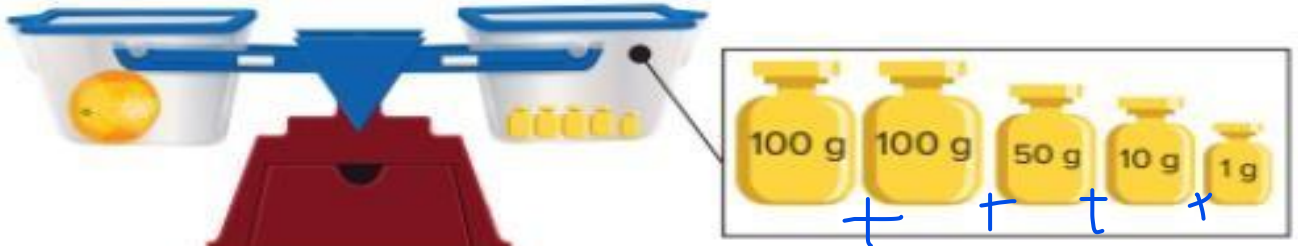
1 kg + 1 kg = 2 kg

2. What is the mass of the lightbulb?



= 35 g

3. What is the mass of the orange?

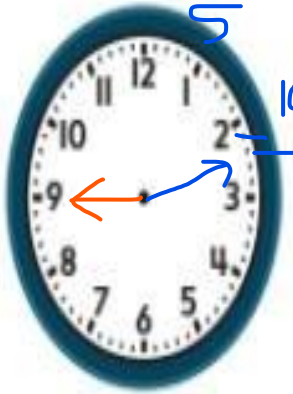


261 g

10	Tell Time to the Nearest Minute	(1-8)	205
		(9-13)	206

7. What would Tina's clock look like if she went to bed at 9:38?

8. What would Tim's clock look like if he went to bed at 9:12?



What time is shown on the clock?

1.

6 : 24

2.

4 : 36

3.

12 : 47

Tina, Troy, and Tim went to bed at different times.

4. What time did Tina go to bed?

Tina

9 : 24

5. What time did Troy go to bed?

Troy

8 : 56

6. What time did Tim go to bed?

Tim

9 : 03

Page :205

10	Tell Time to the Nearest Minute	(1-8)	205
		(9-13)	206

12. STEM Connection Maya and Lamar arrive at an excavation site at different times one morning. Who arrived first? Explain your answer.

Maya

Lamar

Lamar

8:46 is earlier 8:49

13. Extend Your Thinking Jenette went outside to play at 11:27. Camden went outside 2 hours later. How can you show the time each girl went outside on the clocks?

Jenette

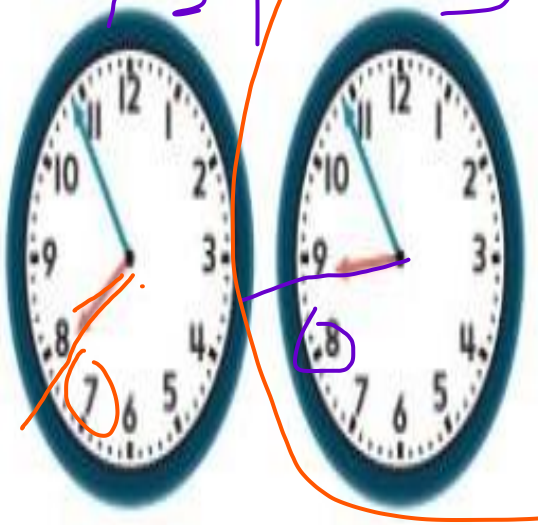
Camden

11:27

Use the clocks for exercises 9 through 11.

7:54 8:54

9. Ray went for a walk at 8:54. Circle the clock that shows the time he left for his walk.



10. What time does the other clock show?

7:54

11. What is the difference between the two time ? Explain your answer.

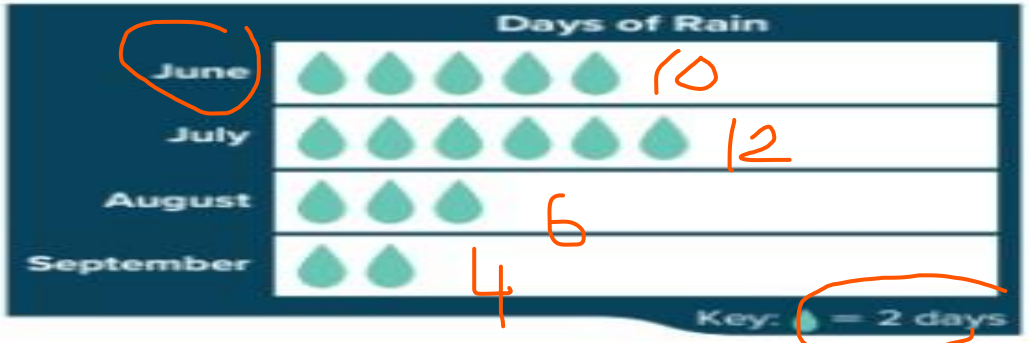
1 hour

8:54
7:54
1:00

11	Understand Scaled Picture Graphs	(1-3)	213
		(4-5)	214

Page :213

Use the picture graph to complete exercises 1 and 2.



1. How many days of rain are represented by each picture? Explain how you know.

0 = 2

2. How many days did it rain in June? Explain how you know.

10

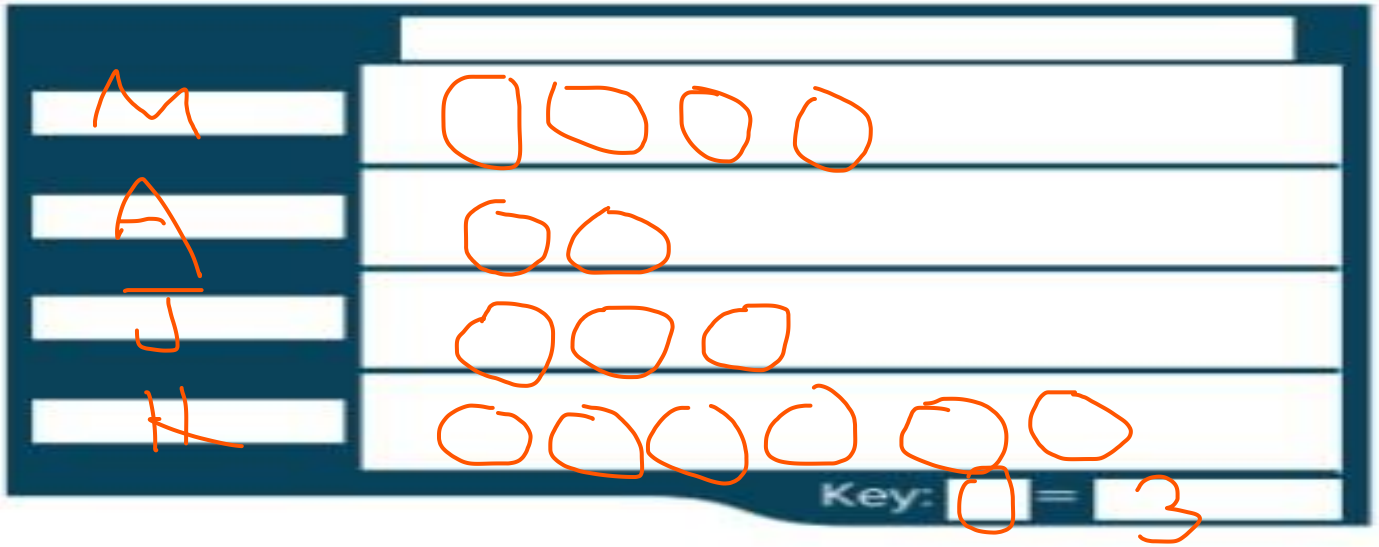
3. The table shows each third grader's favorite subject. How can you display the data in the picture graph?

Favorite Subject	Third Graders
Math	9
Reading	12
Social Studies	6
Science	15

11	Understand Scaled Picture Graphs	(1-3)	213
		(4-5)	214

Page :214

4. The table shows the number of points each player scored in a basketball game. How can you display the data in a scaled picture graph?



Players	Points
Matt	12
Alexa	6
Jim	9
Heidi	18

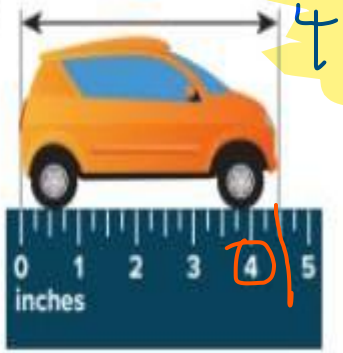
5. **Extend Your Thinking** What are 3 differen scales you could use in a picture graph to represent the data shown in the table?

○ = 2 ○ = 4 ○ = 8

Students	Votes
Arthur	24
Susan	16
Sabine	32
Rich	8
Juan	40

12	Measure to Halves or Fourths of an Inch	(1-7)	225
		20	235

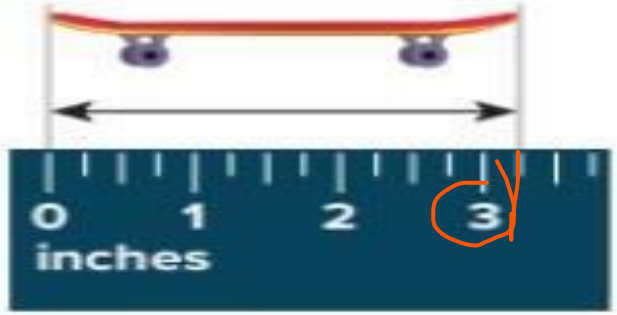
7. What is the most precise measurement of the toy car using the ruler in the picture?



$4\frac{1}{2}$ in

20. What is the length of the mini-skateboard to the nearest quarter inch? (Lesson 12-10)

$3\frac{1}{4}$ in



What is the length of each object to the nearest half inch?

1. $5\frac{1}{2}$ in

2. $2\frac{1}{2}$ in

3. 2 in

What is the length of each object to the nearest quarter inch?

4. $4\frac{3}{4}$ in

5. $2\frac{1}{4}$ in

6. $1\frac{3}{4}$ in

ruler

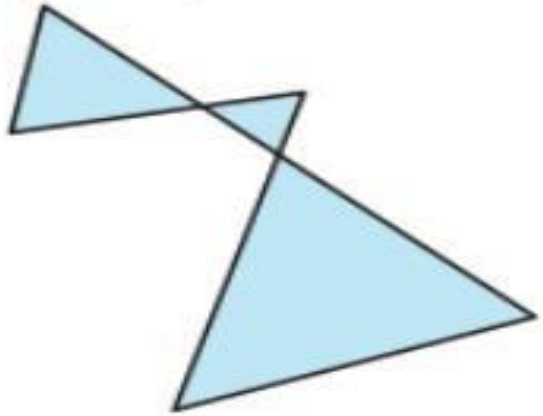
Page :235

Page :225

13	Describe and Classify Polygons	(1-3)	243
		15	261

15. Is this figure a polygo ?

(Lesson 13-1)



A. Yes, it is a polygon.

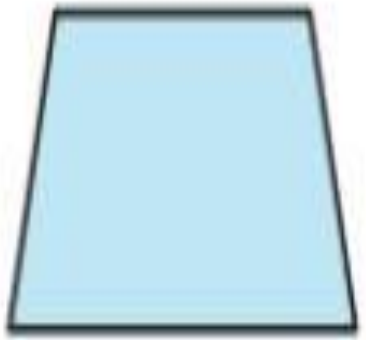
B. No, it has too many sides.

C. No, it is an open figure.

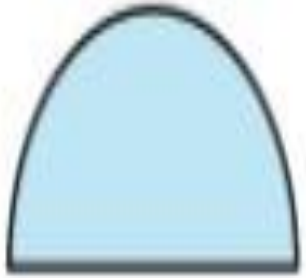
D. No, its sides cross each other.

Page :261

Is the shape a polygon? If not, explain why.

1. 

- close
- straight side
- not cross

2. 

not straight (curve)

3. 

open

Page :243

14	Describe and Classify Polygons	(4-9)	243
		(11,12)	261

عدد sides = angles عدد

Page :243

11. Alejandro drew a polygon that has more sides than a hexagon. Which polygon could Alejandro have drawn? (Lesson 13-1)

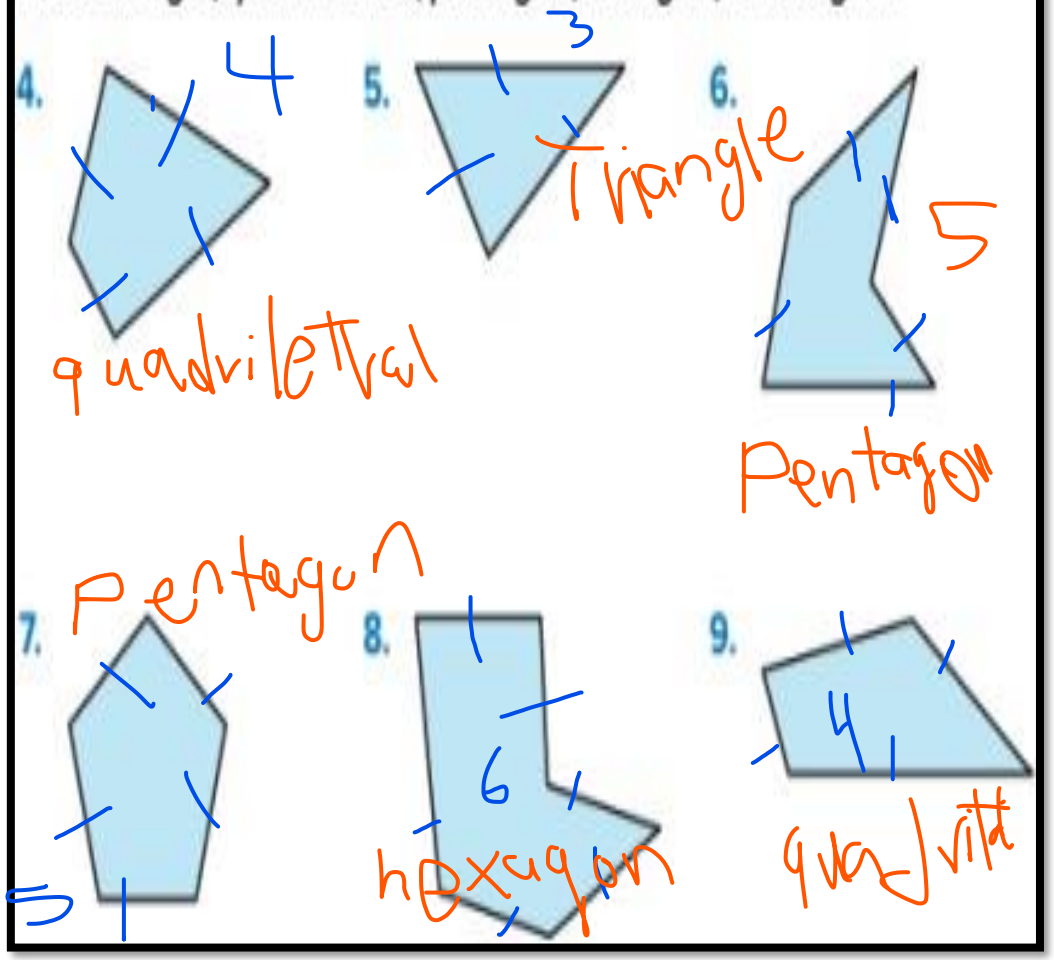
A. triangle
B. quadrilateral
C. octagon
D. pentagon

12. Which statement best describes a pentagon? (Lesson 13-1)

A. a polygon with 5 sides and 4 angles
B. a polygon with 5 sides and 5 angles
C. a polygon with 6 sides and 5 angles
D. a polygon with 6 sides and 6 angles

How can you name the polygon?

Write *triangle, quadrilateral, pentagon, hexagon,* or *octagon.*

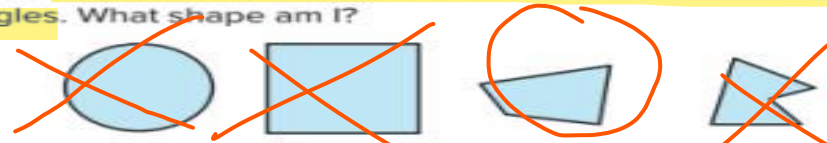


Page :261

15	Describe Quadrilaterals	(1-6)	247
		(7-9)	248
		(7,9)	260

Page :247

7. I am a quadrilateral with 0 pairs of equal sides and 0 right angles. What shape am I?



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8. **Error Analysis** Laila sees a quadrilateral with 4 equal sides and 0 right angles. She says the quadrilateral is a square. How can you help Laila understand and correct her mistake?

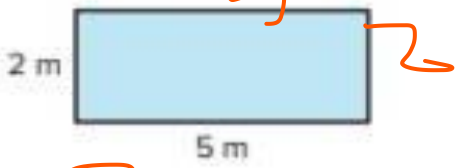
No, rhombus

9. Describe the shape of the sign using its attributes.

rectangle - 4 right angles - 2 pairs of equal sides

How many pairs of equal side lengths and right angles does each quadrilateral have?

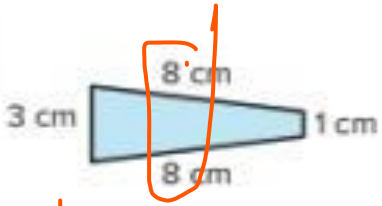
1.



2 pair(s) of equal sides

4 right angle(s)

2.



1 pair(s) of equal sides

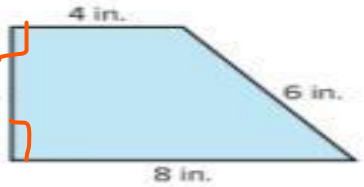
0 right angle(s)

3.

2 pair(s) of equal sides

0 right angle(s)

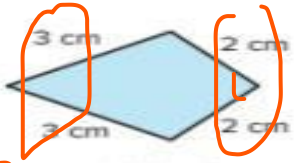
4.



0 pair(s) of equal sides

2 right angle(s)

5.



2 pair(s) of equal sides

1 right angle(s)

6.

2 pair(s) of equal sides

4 right angle(s)

7. What attributes best describe this figur ? (Lesson 13-2)

Choose all that apply.

A. It has 2 right angles.
B. It has 4 angles.
C. It has 4 sides.
D. It has 4 right angles.

9. Which attribute best describes this figur ? (Lesson 13-2)

A. 1 pair of equal sides
B. 2 pairs of equal sides
C. all angles are right angles
D. all sides are the same length

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الأسئلة المقالية - FRQ	16	Two-Step Problems Involving Multiplication and Division	Work Together	138
			(1-5)	139
			(6-10)	140
	17	Explain the Reasonableness of a Solution	(1-4)	147
			(5-8)	148
	18	a) Solve Problems Involving Area and Perimeter	(1-8)	171
		b) Solve Problems Involving Measurement	(8-11)	178
	19	Understand Scaled Bar Graphs	(1,2)	217
			(3-5)	218
	20	Show Measurement Data on a Line Plot	(1-9)	231
			19	235

* Questions might appear in a different order in the actual exam, or on the exam paper.

* قد تظهر الأسئلة بترتيب مختلف في الامتحان الفعلي، أو على ورقة الامتحان .

** As it appears in the textbook,and LMS.

** كما وردت في كتاب الطالب وLMS .

الأسئلة المقالية (الأسئلة الكتابية)

5 أسئلة

الدرجات من 7-9 درجات

16	Two-Step Problems Involving Multiplication and Division	Work Together	138
		(1-5)	139
		(6-10)	140

Work Together

Last week, Mason brought 28 watermelon slices to soccer practice. Each of the 7 players got the same number of slices. This week, Mason doubles the number of slices for each player. Write equations with a letter for the unknown to find the number of watermelon slices he gives each player this week.

$28 \div 7 = 4$

$4 \times 2 = 8$

Page :138

16	Two-Step Problems Involving Multiplication and Division	Work Together	138
		(1-5)	139
		(6-10)	140

How can you use equations with letters for the unknowns to solve the problem?

3. Jerry's mother brings orange slices to dance class. She cut each orange into 4 slices. There are 2 slices for each of the 8 dancers. How many oranges did his mother cut?

1) 2x4=16 2) 16÷4=4

4. Connie's photo album has 6 pages and each page has 6 photos. She decides to put all the photos already in her album on just 4 pages. She puts the same number of photos on all 4 pages. How many photos will she put on each page?

1) 6x6=36 2) 36÷ 4=9

5. How do you know when to multiply and when to divide to solve a real-world problem? Explain your reasoning.

What equation represents the bar diagram?

3x8=b 3x6=m

1. b: 8 | 8 | 8

2. m: 6 | 6 | 6

24 = c | c | c | c 24÷4=c

18 = 9 | 9 18÷9=2

Page :139

16	Two-Step Problems Involving Multiplication and Division	Work Together	138
		(1-5)	139
		(6-10)	140

Page :140

How can you use equations with letters for the unknowns to solve the problem?

6. Lana brings home 48 shells from the beach. She divides the shells into 6 equal groups and keeps 1 group for herself. Then she gives half of her group to her brother. How many shells does Lana give to her brother?

1)48÷6=8 2)8÷2=4

7. **STEM Connection** Hiro explored 12 shipwrecks with 4 robots. Each robot explored the same number of shipwrecks. One of the robots brought back 2 items from each wreck it explored. How many objects did it bring back?

1)12÷4=3 2) 3x2 =6

8. Francine uses 24 yards of fabric to make 8 blankets. She uses the same amount of fabric for each blanket. How many yards of fabric does she need to make 4 blankets?

1)24÷8=3 2)3x4=12

9. Kyle buys 9 spools of ribbon. Each spool has 4 yards of ribbon on it. If she uses 6 yards of ribbon per bow, how many bows can she make?

1) 9x4=36 2)36÷6=6

10. **Extend Your Thinking** Mrs. Tyler buys boxes of pencils. She gives 5 pencils to each student. 8 students get pencils. How many boxes could she have bought and how many pencils could be in each box?

1) 5x8=40

2)40÷4=10

17	Explain the Reasonableness of a Solution	(1-4)	147
		(5-8)	148

How can you estimate to determine the reasonableness of an answer? Circle the reasonable answer.

1. At the train station, Matt buys breakfast for $4 and 3 weekly train passes for $9 each. How much does Matt spend at the station?

A. $21 B. $31 C. $18 D. $55

3x9=27
27+4=31

2. Ava shares 42 stickers evenly among 6 friends. Then she gives each friend 4 more stickers. How many stickers does each friend receive?

A. 11 stickers B. 25 stickers C. 5 stickers D. 33 stickers

42÷6=7
4+7=11

Is the answer reasonable? Show your thinking.

3. Maria walks 3 minutes to the bus stop. Then she rides the bus 8 minutes to get to school. She does this 5 days per week. She says she spends 55 minutes traveling to school each week.

3+8=11
11x5=55
Estimate : 10x5=50 , 55 close to 55

4. Marcus spends $36 on sunflowers and buys 4 zinnia plants for his garden. Marcus says he spent $98 on plants.

Flower Prices	
Sunflowers	$6
Daisies	$7
Zinnias	$8

4x8=32
32+36=68
Estimate: 30+35=75
98 not close to 75
not reasonable

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17	Explain the Reasonableness of a Solution	(1-4)	147
		(5-8)	148

Solve. Then use an estimate to show that your answer is reasonable.

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5. John has 7 packages of pencils. There are 9 pencils in each package. He donates 49 pencils to the school supply closet. How many pencils does John have left?

7x9=63 63-49=14 , Estimate : 60-50=10 , 14 close to 10 so resonable

6 Evelyn has 80 beads. She uses 24 for a necklace. She wants to use the rest to make 8 bracelets with the same number of beads on each. How many beads will each bracelet have?

80-24 = 56 , 56÷8=7 , Estimate 60÷10=6 6 is close to 7 so reasonable

7. **STEM Connection** Hiro designs a boat to carry research supplies. His boat carries 6 crates filled with 9 boxes each. It also carries 5 boxes of snacks. He thinks the boat carries 59 boxes. Is his answer reasonable?

6x9 = 54 , 54+5=59 Estimate : 55+5=60 , 60 is close to 55 so reasonable

8. **Extend Your Thinking** Kara has a box of 30 crackers. She eats 3 and wants to give the rest to 5 friends to share equally. She estimates there are enough for each friend to get 5 crackers. Explain Kara's estimate.

30-3=27 27÷5= Estimate 25÷5=5 so reasonable

18	a) Solve Problems Involving Area and Perimeter	(1-8)	171
	b) Solve Problems Involving Measurement	(8-11)	178

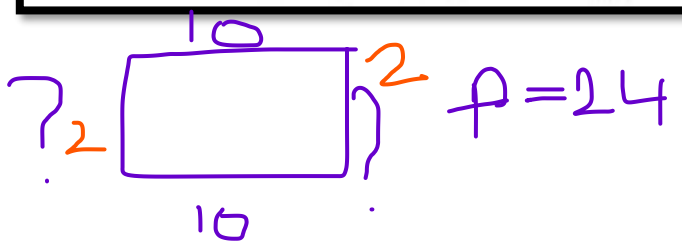
7. A rectangle has an area of 20 square centimeters. What could be the length and width of the rectangle?

A=20

4 x 5 = 20

2 x 10 = 20

8. A rectangular patch of grass has a perimeter of 24 feet. If one of the side lengths is 10 feet, what are the other side lengths? Write an equation to support your answer.



P=24

10+10=20

24-20=4

4÷2=2

What is the perimeter and area of the figure? Include the unit.

1. 

perimeter = 4+9+4+9=26

area = 4x9=36

2. 

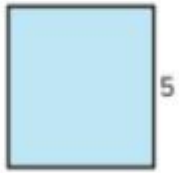
perimeter = 10+1+10+1=22

area = 10x1=10

3. 

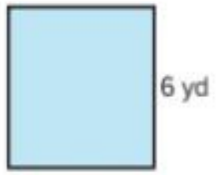
perimeter = 5+2+5+2=14

area = 5x2=10

4. 

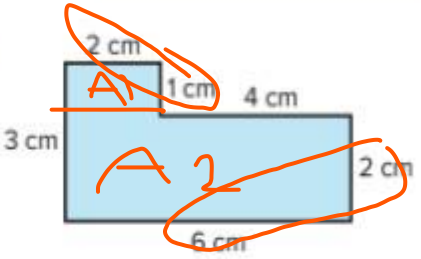
perimeter = 5+5+5+5=20

area = 5x5=25

5. 

perimeter = 6+6+6+6=24

area = 6x6=36

6. 

perimeter = 2+1+4+2+6+3 =18

area =

A1=2x1=2 A2=6x2=12

A=12+2=14

Page :171

18	a) Solve Problems Involving Area and Perimeter	(1-8)	171
	b) Solve Problems Involving Measurement	(8-11)	178

10. A classroom is 28 feet wide. The teacher divides the classroom into 4 sections of equal width. How wide is each section? Write an equation to represent the problem.

28÷ 4=7

11. **Extend Your Thinking** The school track is 400 meters. Sahir ran half the length of the track. Esme ran half the length that Sahir ran. How far did Esme run? Explain your thinking.

Sahir 400÷2=200

Esme 200÷2=100

8. **Error Analysis** Mandy needs to make 4 bracelets. Each requires 9 inches of string. She says she can use an equation to help her find the total number of inches she needs. Do you agree? Explain why or why not.

yes , 4x9=36

9. Sheila tapes together 4 postcards. The total length of the 4 postcards is 24 inches. How long is each postcard? Write an equation to represent the problem.

24÷ 4 =6

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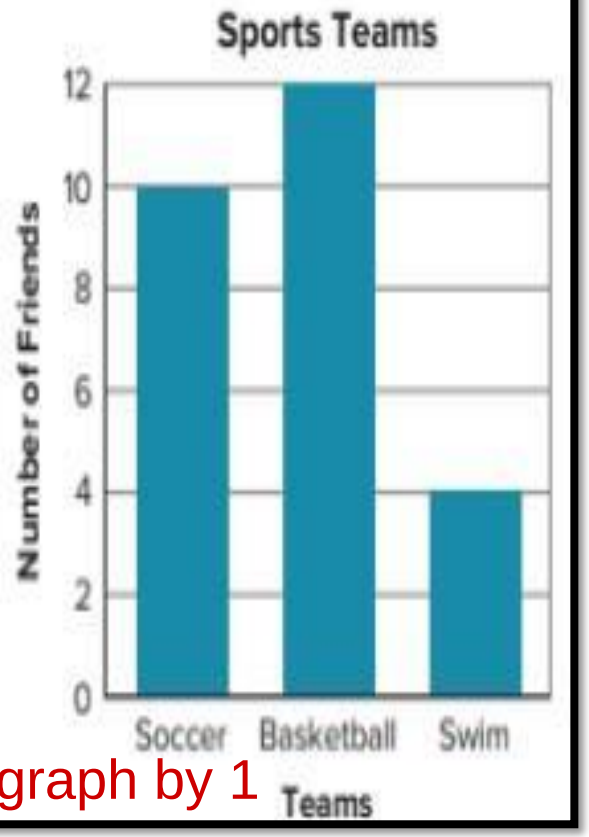
19	Understand Scaled Bar Graphs	(1,2)	217
		(3-5)	218

2. Error Analysis Cameron created a bar graph using the data in the table. How can you explain the error in the graph?

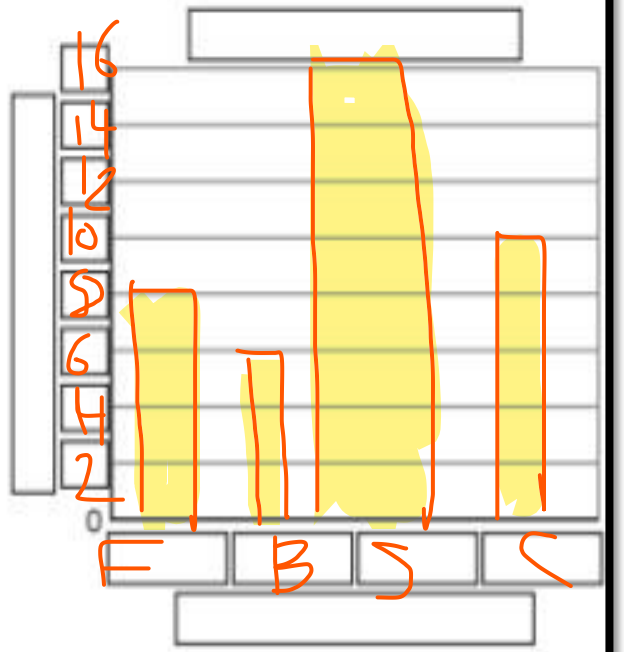
Sports Teams	
Team	Number of Friends
Soccer	5
Basketball	6
Swim	2



Scale by 2 , he complete graph by 1

1. How can you display the data in a scaled bar graph?

Class Goldfish Name	
Name	Number of Votes
Flash	8
Bubbles	6
Squirt	16
Cheese	10



a. How did you decide the scale of your graph?

Even numbers

b. What is another scale you could use for your graph?

4

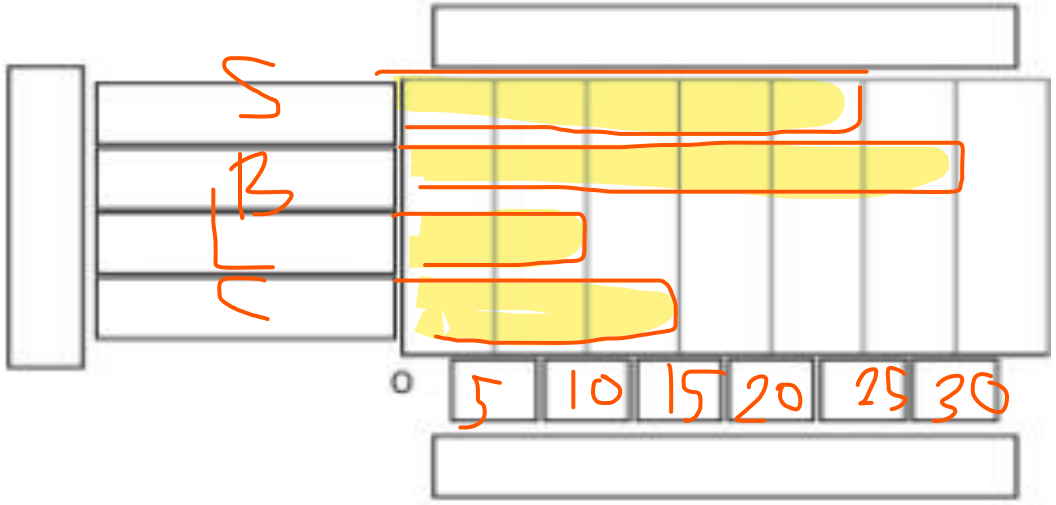
Page :217

19	Understand Scaled Bar Graphs	(1,2)	217
		(3-5)	218

Page :218

3. How can you display the data in a scaled bar graph?

Summer Trips	
Place	Trips to Each Place
City	15
Lake	10
Beach	30
State Park	25



4. Which parts of the graph did you need to complete before displaying the data with bars? Explain why these needed to be completed first

Scale and names

5. How can you explain the difference between a scaled bar graph and a bar graph?

Scaled bar graph scale grater than 1
bar graph scale by 1

20	Show Measurement Data on a Line Plot	(1-9)	231
		19	235

4. How many figurines are shorter than 2 inches?

Shorter (befor)

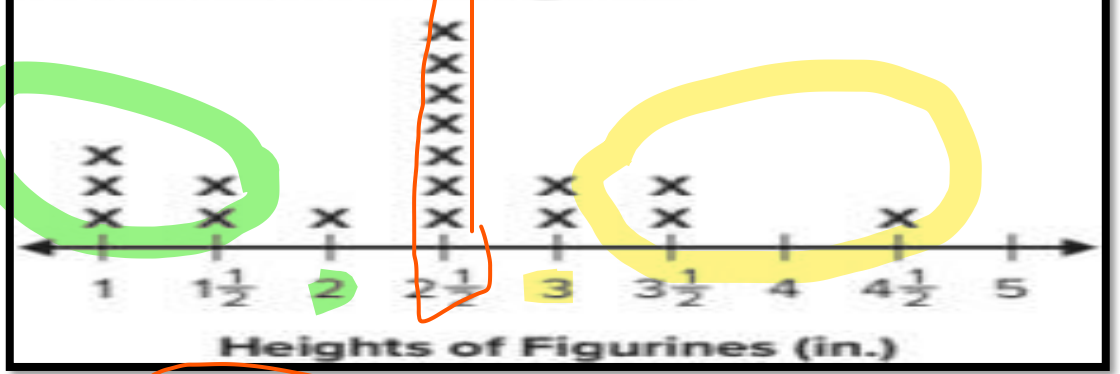
5

taller (after)

5. How many figurines are taller than 3 inches?

3

Use the line plot to complete exercises 1 through 3.



1. How many figurines are in the collection?

all

18

2. Which height is most common?

2 1/2

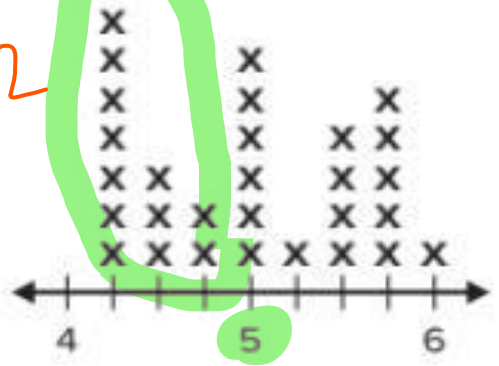
3. Which measurements were not the height of any figurine ?

4, 5

Page :231

20	Show Measurement Data on a Line Plot	(1-9)	231
		19	235

19. Each student was given a piece of ribbon and asked to measure its length to the nearest quarter inch. The line plot shows the lengths of all the pieces of ribbon. (Lesson 12-11)



Lengths of Ribbon (inches)

How many pieces of ribbon are less than 5 inches long?

A. 12 B. 18

C. 29 D. 6

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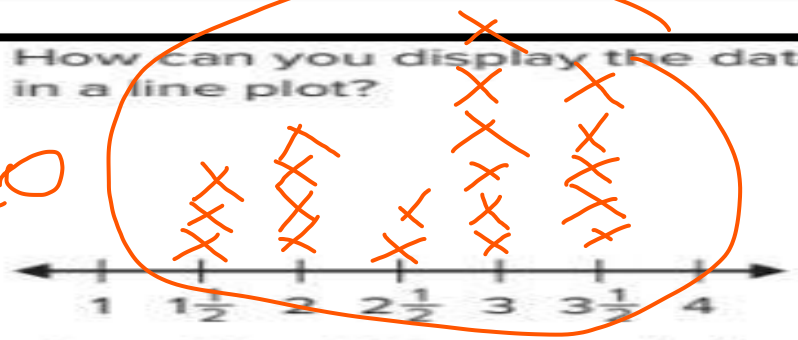
6. How can you display the data in a line plot?



Lengths of Crayons (in.)

7. How many crayons are $2\frac{1}{2}$ inches long?

Brody measures his crayons to the nearest half inch. He records the measurements in a table.

Crayon Lengths (in.)				
2	3	$1\frac{1}{2}$	3	$1\frac{1}{2}$
$3\frac{1}{2}$	$2\frac{1}{2}$	$3\frac{1}{2}$	3	2
2	$3\frac{1}{2}$	3	2	$2\frac{1}{2}$
3	$3\frac{1}{2}$	$3\frac{1}{2}$	$1\frac{1}{2}$	3

8. How many more 3-inch crayons are there than $1\frac{1}{2}$-inch crayons?

9. How many crayons are shorter than 3 inches?

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Good
Luck!