تجميعة أسئلة وفق الهيكل الوزاري ريفيل

التواصل الاجتماعي بحسب الصف السادس

روابط مواد الصف السادس على تلغرام

الرياضيات	اللغة الانجليزية	اللغة العربية	التربية الاسلامية

المزيد من الملفات بحسب الصف السادس والمادة رياضيات في الفصل الثاني

تجميعة أسئلة وفق الهيكل الوزاري بريدج	1
نموذج الهيكل الوزاري ريفيل المسار العام	2
نموذج الهيكل الوزاري بريدج المسار العام	3
نموذج الهيكل الوزاري ريفيل المسار المتقدم	4
مراجعة على دروس الوحدة الخامسة	5

Alhuiteen school EOT2 coverage GRADE 6

Mathematics

Teacher :Alaa Elatawy

الإمارات العربية المتحدة
وزارة التربية والتعليم

Academic Year / العام الدراسي	2023/2024
Term / الفصل	2
Subject / المادة	Mathematics/Reveal الرياضيات/ريفيل
Grade / الصف	6
Stream / المسار	General العام
Number of MCQ / عدد الأسئلة الموضوعية	15
Marks of MCQ / درجة الأسئلة الموضوعية	4
Number of FRQ / عدد الأسئلة المقالية	6
Marks per FRQ / الدرجات للأسئلة المقالية	(6-9)
Type of All Questions / نوع كافة الأسئلة	الأسئلة الموضوعية /MCQ
	الأسئلة المقالية /FRQ
Maximum Overall Grade / الدرجة القصوى الممكنة	100
Exam Duration - مدة الامتحان	150 minutes
Mode of Implementation - طريقة التطبيق	Paper-Based
Calculator / الآلة الحاسبة	Not Allowed غير مسموحة

Part1	Type of Questions	FRQ/ مقالي	الدرجات لكل سؤال	(6-9) درجات
1	Write and solve division equations for real-world and mathematical problems by using the Multiplication Property of Equality	(5-10)		Page :375

Solve each equation. Check your solution. (Examples 2 and 3)

5. $6 = \frac{j}{8}$

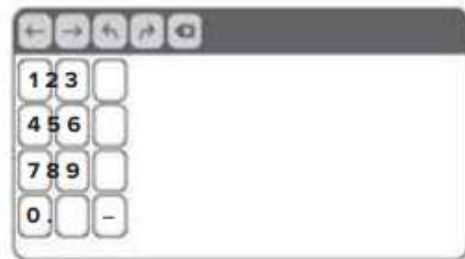**6.** $\frac{k}{7} = 7$

7. $\frac{z}{4} = \frac{2}{3}$

8. $\frac{1}{2} = \frac{w}{8}$

9. $5.31 = \frac{p}{9.2}$

Test Practice

10. Equation Editor Solve $\frac{x}{1.3} = 1.94$.

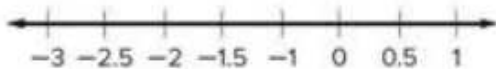| Part1	Type of Questions	FRQ/ مقالي	الدرجات لكل سؤال	(6-9) درجات
2	Understand how inequalities are similar to and different from equations, and graph the solution of an inequality on a number line	(1-6)		Page :389

1. The minimum deposit for a new checking account is $75. Write an inequality to represent the amounts in dollars a that could be deposited in a new checking account. (Example 1)

2. To win a medal in a 5K race, a runner's time must be less than 22 minutes. Write an inequality to represent the times in minutes m that would win a medal. (Example 1)
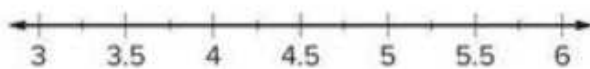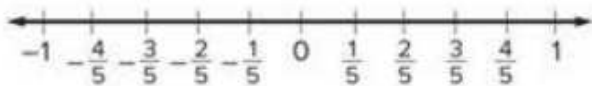
NEVER GIVE UP

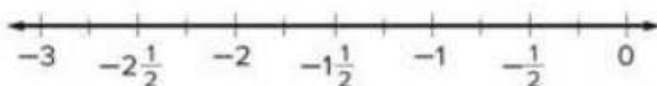**Graph each inequality on the number line.** (Examples 2 and 3)

3. $b < -1.5$

-3 -2.5 -2 -1.5 -1 0 0.5 1

4. $d \geq 4.75$

3 3.5 4 4.5 5 5.5 6

5. $a > \frac{4}{5}$

-1 $-\frac{4}{5}$ $-\frac{3}{5}$ $-\frac{2}{5}$ $-\frac{1}{5}$ 0 $\frac{1}{5}$ $\frac{2}{5}$ $\frac{3}{5}$ $\frac{4}{5}$ 1

6. $d \leq -2\frac{1}{4}$

-3 $-2\frac{1}{2}$ -2 $-1\frac{1}{2}$ -1 $-\frac{1}{2}$ 0

2	Use variables, which represent independent and dependent values, to write one-step and two-step equations from real-world situations	(1-5)	Page :413

1. The table shows the total cost c of buying t movie tickets. Write an equation to represent the relationship between c and t. (Example 1)

Number of Tickets, t	Total Cost ($), c
1	7
2	14
3	21
4	28

2. The table shows the total number of pencils p in b boxes. Write an equation to represent the relationship between p and b. (Example 1)

Number of Boxes, b	Total Number of Pencils, p
1	12
2	24
3	36
4	48

3. The table shows the total cost of bowling any number of games and renting bowling shoes. Write a two-step equation to represent the total cost c for bowling g games. (Example 2)

Number of Games, g	Total Cost ($), c
1	6
2	10
3	14
4	18

4. The table shows the total cost of renting a canoe based on the number of hours and a one-time rental fee. Write a two-step equation to represent the total cost c of renting a canoe for h hours. (Example 2)

| Number of Hours, h	Total Cost ($), c
1	16
2	27
3	38
4	49

Test Practice

5. Open Response The table shows the total cost of belonging to a fitness center based on the number of months and a one-time registration fee. Write a two-step equation to represent the total cost c for belonging to the fitness center for m months.

Number of Months, m	Total Cost ($), c
1	25
2	40
3	55
4	70

| 4	Graph a relationship represented by an equation and write an equation represented by a graph by identifying and using the independent and dependent variables	(1-4)	Page :421

1. The equation $p = 144b$ represents the number of pencils p in b boxes. Graph the relationship on the coordinate plane. (Example 1)

Pencil Boxes
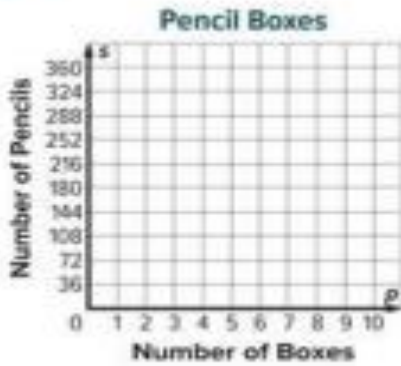
2. The equation $c = 2b + 6$ represents the total cost c of b sets of beads and one necklace string. Graph the relationship on the coordinate plane. (Example 1)

Necklace Supplies

3. The graph shows the total cost c of buying one large bucket of popcorn and d large drinks. Write an equation from the graph that could be used to find the total cost c if you buy one large bucket of popcorn and d large drinks. (Example 2)

Concessions
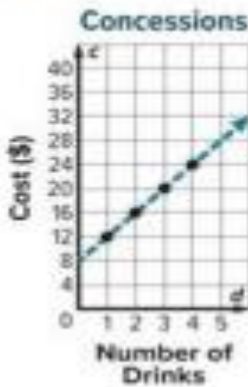
4. Open Response The graph shows the total cost c of buying one parking pass and t tickets to a concert. Write an equation from the graph that could be used to find the total cost c if you buy one parking pass and t tickets to a concert. (Example 2)

Concert Attendance
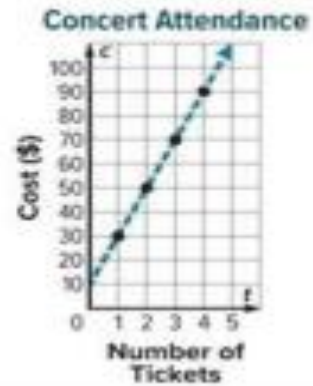
5	Use equations and rules to find missing values of independent and dependent variables in tables	(1-6)	Page :403

1. Sadie ordered a pizza and had it delivered. The delivery fee is $3.50. The total cost c is equal to the cost of her pizza p plus $3.50. The rule is p + 3.50. Complete the table using the rule to find the total cost if her pizza costs $9.75, $12.00, or $14.50. (Example 1)

Input, Cost of Pizza ($), p	Rule p + 3.50	Output, Total Cost ($), c
9.75		
12.00		
14.50		

2. Joshua has a coupon for $1.50 off his purchase at the souvenir shop. The total cost c is equal to the cost of his purchase p minus $1.50. The rule is p − 1.50. Complete the table using the rule to find the total cost if his purchase is $5.67, $8.34, or $11.97. (Example 1)

Input, Cost of Purchase ($), p	Rule p − 1.50	Output, Total Cost ($), c
5.67		
8.34		
11.97		

3. Miranda has a coupon for $0.75 off any salad at a restaurant. The total cost c is equal to the cost of her salad s minus $0.75. The rule is s − 0.75. Complete the table using the rule to find the total cost if her salad costs $2.79, $3.55, or $4.25. (Example 1)

Input, Cost of Salad ($), s	Rule s − 0.75	Output, Total Cost ($), c
2.79		
3.55		
4.25		

4. Avery is buying material by the yard to make bags. The material costs $4.98 per yard. The total cost c of y yards is equal to 4.98 times y. Complete the table to find the number of yards Avery purchased if the total cost is $14.94, $29.88, or $44.82. (Example 2)

Input, Number of Yards, y	Rule 4.98y	Output, Total Cost ($), c
		14.94
		29.88
		44.82

5. Each pie at a bakery costs $9.50. The total cost c of p pies is equal to 9.50 times p. Complete the table to find the number of pies purchased if the total cost is $19.00, $28.50, or $47.50. (Example 2)

Input, Number of Pies, p	Rule 9.50p	Output, Total Cost ($), c
		19.00
		28.50
		47.50

6. Table Item Anthony is buying plants for his garden. Each plant costs $0.95. The total cost c of p plants is equal to 0.95 times p. Complete the table to find the number of plants Anthony purchased if the total cost is $7.60, $11.40, or $15.20.

Input, Number of Plants, p	Rule 0.95p	Output, Total Cost ($), c
		7.60
		11.40
		15.20

6	Identify parts of an expression from a verbal description in order to write an algebraic expression, using variables for unknown quantities, that models a	(4-9)		Page :285

For each verbal phrase, define a variable to represent the unknown quantity. Then write the phrase as an algebraic expression. (Examples 2-4)

4. three more pancakes than Hector ate

5. twelve fewer questions than were on the first test

6. two and one-half times the number of minutes spent exercising

7. one-third the number of yards

8. four less than seven times Lynn's age

9. $2.50 more than one-fourth the cost of a pizza

| **Part 2**	**Type of Questions**	موضوعى/MCQ	الدرجات لكل سؤال	**4 درجات**
				درجات
7	Identify the independent and dependent variables in a given scenario and use that information to create an equation, table, and graph that represent the situation	(1-6)		Page :11

1. A school sells tickets to their school play through an online ticket company. Each ticket costs $8 and the company charges a $2.50 processing fee per order. Represent the relationship between the number of tickets bought t and the total cost c with an equation, a table, and a graph. (Example 1)

a. Represent the relationship with an equation.

b. Represent the relationship with a table.

Number of Tickets, t	Total Cost ($), c
1	
2	
3	
4	

c. Represent the relationship with a graph.


School Play
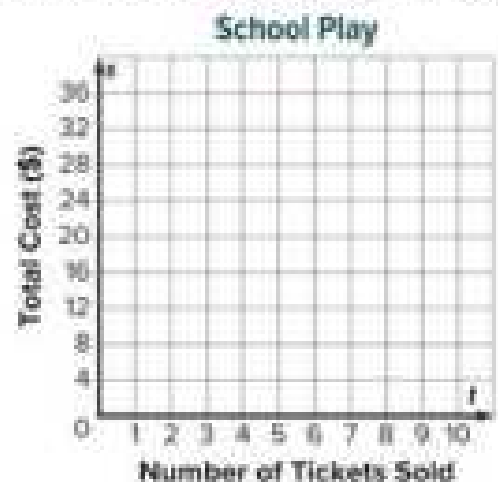
2. Carmelo earns a weekly allowance of $5 plus an additional $0.75 for each chore that he completes. Represent the relationship between the total earned *t* and the number of chores completed *c* with an equation, a table, and a graph. (Example 1)

a. Represent the relationship with an equation.

b. Represent the relationship with a table.

Number of Chores, c	Total Earned ($), t
1	
2	
3	
4	

c. Represent the relationship with a graph.

Allowance
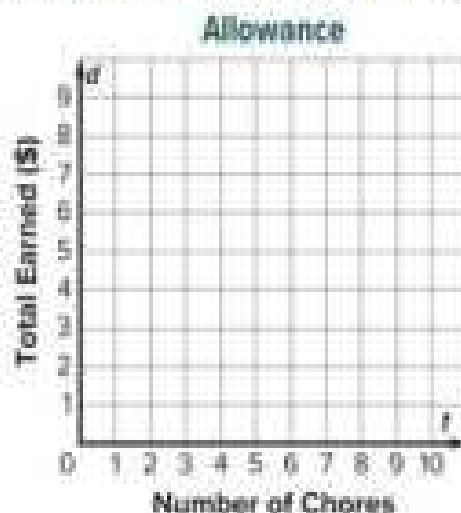
Test Practice

3. Open Response The table shows the earnings for each pie sold at the sixth grade bake sale. Represent the relationship between the number of pies sold *p* and the total earnings *e* with an equation.
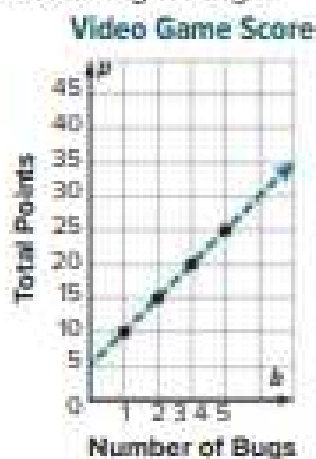
Number of Pies, p	Total Earnings ($), e
1	6
2	12
3	18

Apply

4. Zari is comparing the costs of having cupcakes delivered from two different bakeries. Betty's Bakery offers free delivery and sells cupcakes by the dozen. The table shows the total cost *c* of *d* dozens from Betty's Bakery. The Sweet Shoppe charges $20 for delivery and $18 per dozen. The equation $c = 18d + 20$ represents the total cost *c* of *d* dozens of cupcakes and delivery from the Sweet Shoppe. If Zari has $110 to spend, which bakery should she use to order the greatest number of cupcakes? Explain.

Number of Dozens of Cupcakes, d	Total Cost ($), c
1	24
2	48
3	72

5. 🔵 **Persevere with Problems** Ryder plays a video game where each player is given points and players earn more points by catching bugs. Write an equation to represent the total number of points *p* earned for catching *b* bugs. Use the equation to find Ryder's points after catching 10 bugs.

Video Game Score

6. Multiple Representations Winslow earns $15.50 for each lawn that he mows.

a. Represent the relationship between the number of lawns mowed *m* and his total earnings *e* with an equation.

b. Represent the relationship in a table for 0, 1, 2, and 3 lawns mowed.

8	Use the properties of operations to write expressions in simplest form and check to see if two expressions are equivalent	(1-4)	Page :327

Use properties of operations to determine whether or not the expressions are equivalent. (Example 1)

1. $(x + 10) + x + 9$ and $2(x + 7) + 5$

2. $0.5x + 1$ and $1(0.5x)$

Use substitution to determine whether or not the expressions are equivalent. (Examples 2 and 3)

3. $3x + 2x + x$ and $7x$

4. $x + 1$ and $\frac{2}{3}x^2 + \frac{1}{3}x^2 + 1 + x$

9	Write and solve subtraction equations for real-world and mathematical problems by using the Addition Property of Equality	(5-14)	Page :357,358

Solve each equation. Check your solution. (Examples 2 and 3)

5. $24 = x - 5$

6. $z - 7 = 19$

7. $z - 9\frac{1}{3} + = 1\frac{5}{9}$

8. $5\frac{1}{2} = b - 12\frac{1}{4}$

Test Practice

9. $67.9 = c - 4.45$

10. Equation Editor Solve $x - 7.49 = 87.3$.

11. After spending money for a golf outing, Gus had $51.92 remaining in his checking account. The table shows how much money he spent on different items to participate in the outing. Use an equation to find how much money Gus originally had in his checking account.

Item	Cost ($)
Entry Fee	94.50
Golf Shoes	44.25
Gloves	11.25

12. Robin made two batches of every item shown in the table. At the end of the day, she had $1\frac{1}{4}$ cups of flour left. Use an equation to find how much flour Robin originally had on Saturday.

Baking Item	Amount of Flour
Bread	$1\frac{3}{4}$ cups
Muffins	2 cups
Pancakes	$1\frac{1}{2}$ cups

13. (MP) **Reason Abstractly** During a test flight, Jeri's rocket reached a height of 18 yards above the ground. This was 7 yards less than the height that Devon's rocket reached. Did Devon's rocket reach a height greater than 23 yards? Explain.

14. (MP) **Find the Error** A student is solving the equation $x - 3.2 = 5.5$. Find the student's mistake and correct it.

$$x - 3.2 = 5.5$$
$$\underline{-3.2 \quad -3.2}$$
$$x \qquad = 2.3$$

10	Write and evaluate numerical expressions involving whole-number exponent	(1-10)	Page :275

Evaluate each expression. (Examples 1 and 2)

1. $64 \div (15 - 7) \times 2 - 9$

2. $9 + 8 \times 3 - (5 \times 2)$

3. $4 \times (5^2 - 12) - 6$

4. $78 - 2^4 + (14 - 6) \times 2$

5. $9 + 7 \times (15 + 3) \div 3^2$

6. $13 + (4^3 \div 2) \times 5 - 17$

7. $4 + \left(6^2 + \frac{1}{4}\right) \times 3$

8. $12 + \left(2^3 + \frac{2}{3}\right) - 2$

9. $36 \div \left(3^2 + \frac{3}{4}\right) - 2.4$

10. $80 \div \left(4^2 + \frac{2}{5}\right) + 3.75$

11	Understand how inequalities are similar to and different from equations, and graph the solution of an inequality on a number line	(7-10)	Page :389

7. Which of the following are solutions of the inequality $t + 7 \le 12$: 4, 5, 6? (Example 4)

8. Which of the following are solutions of the inequality $h - 4 > 9$: 12, 13, 14? (Example 4)

9. Which of the following are solutions of the inequality $8r \ge 1.8$: $\frac{1}{5}, \frac{1}{4}, \frac{1}{3}$? (Example 5)

10. Which of the following are solutions of the inequality $\frac{24}{n} < 6$: 0.25, 0.4, 0.5? (Example 5)

| 12 | Find the greatest common factor and least common multiple of two whole numbers | (7-10) | Page :303 |

7. On every fourth visit to the hair salon, Margot receives a discount of $5. On every tenth visit, she receives a free hair product. After how many visits will Margot receive the discount and a free product at the same time? (Example 3)

8. The table shows the city bus schedule for certain bus lines. Both buses are at the bus stop right now. In how many minutes will both buses be at the bus stop again? (Example 3)

Bus Line	Arrives at the bus stop every...
A	25 minutes
B	15 minutes

Use any method to find the least common multiple of each pair of numbers. (Example 4)

9. 4, 6

10. 3, 5

| 13 | Write and evaluate numerical expressions involving whole-number exponents. | (1-6) | Page :267 |

Write each product using an exponent. (Examples 1 and 2)

1. $4 \times 4 \times 4$

2. $3 \times 3 \times 3 \times 3 \times 3$

3. $15 \times 15 \times 15 \times 15$

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

5. $\frac{1}{3} \times \frac{1}{3} \times \frac{1}{3} \times \frac{1}{3} \times \frac{1}{3} \times \frac{1}{3} \times \frac{1}{3} \times \frac{1}{3}$

6. 1.625×1.625

| 14 | Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single enti | (1-3) | Page :285 |

Identify the terms, like terms, coefficients, and constants in each expression. (Example 1)

1. $4e + 7e + 5 + 2e$

2. $5a + 2 + 7 + 6a$

3. $4 + 4y + y + 3$

15	Evaluate expressions at specific values of their variables.	(1-9)	Page :293

Evaluate each expression when $x = \frac{3}{4}$ and $y = 2.5$. (Example 1)

1. $8x$

2. y^2

3. $\frac{10}{y}$

Evaluate each expression when $a = \frac{2}{3}$, $b = \frac{4}{5}$, and $c = 6$. Write in simplest form. (Example 2)

4. $a + b$

5. $c - b$

6. $b - a$

Evaluate each expression when $a = 4$, $b = 3$, and $c = \frac{1}{3}$. (Example 3)

7. $(3a + 18c) \div b^2$

8. $(a + 12c) \div (7b - 1)$

9. $(2b + 3a)(c^2)$

16	Find the greatest common factor and least common multiple of two whole numbers.	(1-6)	Page :303

Use any method to find the greatest common factor of each pair of numbers. (Examples 1 and 2)

1. 12, 30

2. 4, 16

3. 9, 36

4. 35, 63

5. 42, 56

6. 54, 81

17	Use the Distributive Property to evaluate numerical expressions, to rewrite algebraic expressions, and to factor numerical and algebraic expressions.	(1-12)	Page :313

Use the Distributive Property to expand each algebraic expression. (Example 1)

1. $3(x + 8)$

2. $5(6 + x)$

3. $9(3 + x)$

Use the Distributive Property to simplify each expression. (Example 2)

4. $12 \cdot 3\frac{3}{4}$

5. $15 \cdot 2\frac{2}{3}$

6. $8 \cdot 4\frac{1}{2}$

Use the GCF to factor each numerical expression. (Example 3)

7. $16 + 48$

8. $35 + 63$

9. $26 + 39$

Use the GCF to factor each algebraic expression. (Example 4)

10. $8x + 16$

11. $24 + 6x$

12. $42 + 7x$

18	Use the properties of operations to write expressions in simplest form and check to see if two expressions are equivalent.	(5-10)	Page :327

Simplify each expression. (Examples 4 and 5)

5. $3x + 4 + 5x - 1$

6. $10 + 7x - 5 + 4x$

7. $4x^2 + 6x + 8 + x + 2$

8. $\frac{1}{2}x^2 + x + \frac{1}{2} + 2x + \frac{1}{2}x^2$

9. Simplify $\frac{3}{4} + \frac{2}{3}(9x + 6) + 4x + 3\frac{1}{4}$. (Example 6)

Test Practice

10. Multiselect Which of the following are equivalent to $\frac{3}{4}(8x^2 + 1) + 3x + \frac{1}{4}$? Select all that apply.

☐ $6x^2 + \frac{3}{4} + 3x^2 + \frac{1}{4}$

☐ $6x^2 + 1 + 3x + \frac{1}{4}$

☐ $9x^2 + 1\frac{1}{4}$

☐ $9x^2 + \frac{3}{4} + \frac{1}{4}$

☐ $9x^2 + 2$

☐ $9x^2 + 1$

19	Use substitution to determine whether a given number is a solution of a one-step equation.	(5-8)	Page :339

5. $4.5x = 18; 3, 4, 5$

6. $2.25c = 27; 12, 13, 14$

7. $d \div 5.5 = 4; 22, 23, 24$

8. $36.3 \div y = 12.1; 2, 3, 4$

20	Write and solve addition equations for real-world and mathematical problems by using the Subtraction Property of Equality.	(5-10)	Page :349

Solve each equation. Check your solution. (Examples 2 and 3)

5. $9 = 3 + a$

6. $5 + x = 10$

7. $3\frac{1}{4} + z = 6\frac{3}{4}$

8. $9\frac{1}{2} = b + 2\frac{1}{4}$

Test Practice

9. $18.35 = c + 5.1$

10. Equation Editor Solve $x + 5.15 = 23.85$.

21	Write and solve multiplication equations for real-world and mathematical problems by using the Division Property of Equality.	(1-4)	Page :367

1. Maribel and some friends went to an adventure park. The total cost of their tickets was $374 and each person paid $46.75. Write a multiplication equation that can be used to find how many people bought tickets to the adventure park. **(Example 1)**

2. It takes Samuel $\frac{1}{5}$ hour to walk a mile. Yesterday, Samuel walked for $1\frac{1}{2}$ hours. Write a multiplication equation that can be used to find the number of miles Samuel walked. **(Example 1)**

3. The distance around a lake is 2.6 miles. On Saturday, Doug biked a total of 18.2 miles around the lake. Write a multiplication equation that can be used to find how many times Doug biked around the lake. **(Example 1)**

4. An express delivery company charges $3.25 per pound to mail a package. Georgia paid $9.75 to mail a package. Write a multiplication equation that can be used to find the weight of the package in pounds. **(Example 1)**