حل الوحدة الرابعة عشرة Thinking Algebric التفكير الجبري منهج ريفيل

موقع المناهج ← المناهج الإماراتية ← الصف الخامس ← رياضيات ← الفصل الثالث ← الملف

تاريخ إضافة الملف على موقع المناهج: 2024-05-10 18:38:45

التواصل الاجتماعي بحسب الصف الخامس

اضغط هنا للحصول على جميع روابط "الصف الخامس"

روابط مواد الصف الخامس على تلغرام

التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الرياضيات

المزيد من الملفات بحسب الصف الخامس والمادة رياضيات في الفصل الثالث

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Write Numerical Expressions

Be Curious

What math do you see in this problem?

The school secretary will order some boxes of highlighters.
The boxes will have some yellow and some pink highlighters.

Math is... Mindset

Why is it important to speak clearly and concisely?

Learn

The school secretary will order 9 boxes of highlighters.

How can you show the number of yellow and pink highlighters that will be in the order?

The **numerical expression** 9×6 shows the number of yellow highlighters that will be in the order.

9×6

Boxes ordered → / Yellow highlighters in each box →

The numerical expression 9×3 shows the number of pink highlighters that will be in the order.

9×3

Boxes ordered → / Pink highlighters in each box →

This numerical expression shows the number of yellow and pink highlighters that will be in the order.

$$(9 \times 6) + (9 \times 3)$$

Math is... Precision

How is an equation similar to an expression? How is it different?

You can use numbers—operation symbols, such as $+$, $-$, $\times$, and $\div$—and grouping symbols, such as parentheses, to write numerical expressions.

Work Together

What numerical expressions represent the description?
Add 35 and 72. Then multiply by 12.

$$(35 + 72) \times 12 \text{ or } 12 \times (35 + 72)$$

What numerical expression represents the description?

1. Divide 40 by 5. Then, subtract 2.

   $(40 \div 5) - 2$

2. Multiply 4 and 8. Then, add 7.

   $(4 \times 8) + 7$

3. Add $2\frac{1}{2}$ and $4\frac{2}{3}$. Then, subtract $\frac{1}{8}$.

   $(2\frac{1}{2} + 4\frac{2}{3}) - \frac{1}{8}$

4. Add 4.8 and 5.6. Then, subtract the sum from 16.9.

   $16.9 - (4.8 + 5.6)$

5. Subtract $4\frac{1}{4}$ from $10\frac{2}{5}$. Then, divide by 3.

   $(10\frac{2}{5} - 4\frac{1}{4}) \div 3$

6. Subtract 8 from 32. Then, divide 48 by the difference.

   $48 \div (32 - 8)$

7. Add 6.7 and 8.25. Then, multiply by 11.2.

   $(6.7 + 8.25) \times 11.2$

8. Divide 24 by 6. Multiply 5 and 7. Then, add the quotient and the product.

   $(24 \div 6) + (5 \times 7)$

9. **Error Analysis** Christine is planting 48 marigolds. She will plant 12 of the flowers in pots and the rest in rows of 4 plants each. She wrote this numerical expression to represent the number of plants in each row.

   $48 - (12 \div 4)$

   How do you respond to Christine?

   The grouping symbols should be around 48 − 12 because that is the difference you need to find before dividing by 4.

10. The school cafeteria is making snack packs. Each pack will have the number of carrot sticks and celery sticks shown. What numerical expression represents how many carrot sticks and celery sticks are needed to make 25 snack packs?

    Sample answer: $(25 \times 4) + (25 \times 3)$

11. The principal is making 50 new student packets. Each packet contains 12 pencils and 5 pens. What numerical expression represents how many pencils and pens the principal needs to make the packets?

    Sample answer: $(12 + 5) \times 50$

12. Katie makes 49 cookies. She gives 4 to her sister and then divides the cookies up equally to give to her 9 friends. What numerical expression represents how many cookies each of her friends will get?

    $(49 - 4) \div 9$

13. **Extend Your Thinking** Write your own description and numerical expression.

    Sample answer: $(3 + 2) \times (5 + 10)$; the sum of three and two, times the sum of five and ten.

Interpret Numerical Expressions

?

Be Curious

How are they the same?
How are they different?

$$3 \times (45.8 + 32.6)$$

$$(3 \times 45.8) + (3 \times 32.6)$$

$$(45.8 + 32.6) \times 3$$

Math is... Mindset
How do you show you understand how others are feeling?

Learn

How are these numerical expressions the same? $(10 \times 18) + 4$
How are they different? $10 \times (18 + 4)$

Both expressions have the same numbers. 10, 18, and 4.	$(10 \times 18) + 4$ $10 \times (18 + 4)$
Both expressions use multiplication and addition.	
Both expressions have parentheses.	

The expressions are different in how the numbers are grouped.

This expression is the sum of 4 and the product of 10 and 18.	This expression is the product of 10 and the sum of 18 and 4.
$(10 \times 18) + 4$	$10 \times (18 + 4)$
$180 + 4$	10×22

You can understand numerical expressions by interpreting them.

Math is... Structure
How does looking at the parts of a numerical expression help you interpret it?

Work Together

Interpret the numerical expressions.
Compare the expressions using >, <, or =. Explain your reasoning.

$$(1,525 + 1,583) \div 12 \,\boxed{<}\, 1,525 + 1,583$$

Sample answer: both expressions show the sum of 1,525 and 1,583, but the first expression also divides that sum by a number greater than 1.

1. $(9 \times 18) - 5$

Subtract 5 from the product of 9 and 18.

2. $9 \times (18 - 5)$

Subtract 5 from 18, then multiply the difference by 9.

3. $80 \div (20 \times 4)$

Divide 80 by the product of 20 and 4.

4. $(80 \div 20) \times 4$

Multiply the quotient of 80 divided by 20 by 4.

Compare the expressions using $>$, $<$, or $=$. Explain your reasoning.

5. $120 \div 12 \; \bigcirc{>} \; (120 \div 12) - 9$

Sample answer: The quotient of $120 \div 12$ is reduced by 9 in the second expression.

6. $50.5 \times 7.2 \; \bigcirc{>} \; (50.5 - 4.8) \times 7.2$

Sample answer: The 50.5 is reduced by 4.8 in the second expression.

7. $5\frac{3}{4} \times (2\frac{1}{8} + 3\frac{1}{2}) \; \bigcirc{=} \; (5\frac{3}{4} \times 2\frac{1}{8}) + (5\frac{3}{4} \times 3\frac{1}{2})$

Sample answer: Distributive Property; $5\frac{3}{4}$ is multiplied by both addends.

---

8. A store ordered 4,500 T-shirts and 4,500 sunglasses. Without doing any calculations, which costs more? Explain your reasoning.

sunglasses; Sample answer: Because $22 > 15$, the product of 4,500 and 22 is greater than the product of 4,500 and 15.

Determine whether Expression A is 5 times as much as Expression B. Place a checkmark in the *Yes* or *No* column.

	Expression A	Expression B	Yes	No
9.	$5 \times (1\frac{1}{4} \times 4\frac{5}{8})$	$1\frac{1}{4} \times 4\frac{5}{8}$	✔	
10.	$(5 \times 4.39) + (5 \times 8.99)$	$4.39 + 8.99$	✔	
11.	$(65 \times 5) \times 2$	$(65 \times 2) \times 5$		✔
12.	$(3,492 - 2,482) \times 5$	$3,492 - 2,482$	✔	
13.	$(895 + 345) \div 5$	$895 + 345$		✔
14.	$6.71 \times (3.28 \times 5.16)$	6.71×3.28		✔

15. Extend Your Thinking Write a word problem that could be represented by each numerical expression:

$8 \times (4 + 2)$ $(8 \times 4) + 2$

Explain why the way the expressions are grouped impacts what happens in the word problem.

Answers may vary.

Evaluate Numerical Expressions

Be Curious

What do you see?

Learn

Two students evaluated $6 + (3 \times 8) \div 4$.

What might explain why their answers are different?

When you evaluate expressions, you need to follow certain steps.

Step 1 Evaluate any expressions inside grouping symbols, like parentheses.

$$6 + (3 \times 8) \div 4$$
$$\downarrow$$
$$6 + 24 \div 4$$

Step 2 Perform any multiplication or division in order from left to right.

$$6 + 24 \div 4$$
$$\downarrow$$
$$6 + 6$$

Step 3 Perform any addition or subtraction in order from left to right.

$$6 + 6 = 12$$

One student did not follow order of operations.

When you evaluate numerical expressions, you need to perform operations in a specific order, called order of operations.

Math is... **Structure**
How does the order of operations help you evaluate expressions?

Work Together

Is the evaluation of $10 \times 3 + 2$ the same as the evaluation of $(10 \times 3) + 2$? Explain.

Yes. Sample answer: Both expressions equal 32. Grouping numbers is not necessary unless the grouping changes the order of operations.

Which operation will you perform first to evaluate the expression?
Explain your reasoning. **Explanations may vary.**

1. $25 - 5 \times (4 - 3)$

   subtraction

2. $37 + 8 \div 2 - 5$

   division

3. $\frac{3}{4} \times (2\frac{1}{2} + 6\frac{1}{4})$

   addition

4. $100 \times 4 + 6 - 10$

   multiplication

What is the solution? Show your work. **Check students' work.**

5. $3 + 7 \times 2 = \underline{17}$

6. $(3 + 7) \times 2 = \underline{20}$

7. $56 \div 8 - 3 + 2 \times 5 = \underline{14}$

8. $56 \div (8 - 3 + 2) \times 5 = \underline{40}$

9. $2\frac{3}{8} + 1\frac{1}{4} \times 6\frac{3}{4} - \frac{1}{2} = \underline{10\frac{5}{16}}$

10. $5.8 \times (6.75 + 3.25) \div 2 = \underline{29}$

11. Which numerical expression is equal to 8?

    A. $24 \div 6 \times 4 + 7$

    B. $(24 \div 6) \times 4 + 7$

    Ⓒ $24 \div (6 \times 4) + 7$

    D. $24 \div 6 \times (4 + 7)$

12. Which numerical expression is equal to 1?

    A. $96 \div 12 \times 4 \div 2$

    Ⓑ $96 \div (12 \times 4) \div 2$

    C. $96 \div (12 \times 4 \div 2)$

    D. $96 \div 12 \times (4 \div 2)$

13. **Error Analysis** Brenna evaluated this expression. How can you help Brenna correct her thinking?

    $36 \div 2 \times 9 \div 3 = \frac{2}{3}$

    Sample answer: Brenna multiplied first when she should have performed division and multiplication from left to right first; the answer is 54.

14. **Extend Your Thinking** Evaluate the expression. Then, explain how the use of grouping symbols could change the expression and how you evaluate it.

    $6 \div 2 + 9 \div 3$

    Sample answer: As written, the expression is equal to 6. Grouping symbols would change it only if there were parentheses around $2 + 9$; Then, the answer would be $\frac{2}{11}$.

Order of Operations

MATH PROBES

Name _____

For each problem, determine which operation should be evaluated first. Do not perform the exact evaluation.

1. $4 + 3 \times 9 - 1$

Which expression should be evaluated first?

a. $4 + 3$

(b) 3×9

c. $9 - 1$

d. Doesn't matter which expression is evaluated first

Explain or show your thinking.

Explanations may vary.

2. $24 \div 6 \times 2 + 4$

Which expression should be evaluated first?

(a) $24 \div 6$

b. 6×2

c. $2 + 4$

d. Doesn't matter which is done first

Explain or show your thinking.

Explanations may vary.

For each problem, determine which operation should be evaluated first. Do not perform the exact evaluation.

3. $8 + 3 \times (4 - 1)$

Which expression should be evaluated first?

a. $8 + 3$

b. 3×4

(c) $4 - 1$

d. Doesn't matter which is evaluated first

Explain or show your thinking.

Explanations may vary.

4. $6 \div (3 + 3) \times 4$

Which expression should be evaluated first?

a. $6 \div 3$

(b) $3 + 3$

c. 3×4

d. Doesn't matter which is evaluated first
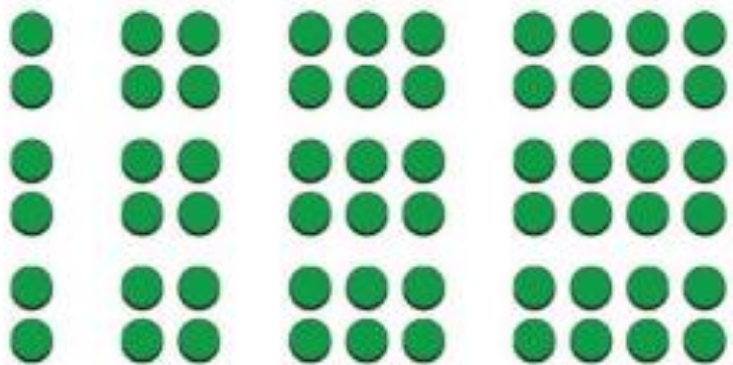
Explain or show your thinking.

Explanations may vary.

Numerical Patterns

? Be Curious

What questions can you ask?

Learn

Alex and Jenna participate in a sit-up challenge. They both do 0 sit-ups on the first day. Each day after the first day, Alex adds 2 sit-ups to the number she did the previous day and Jenna adds 6 sit-ups to the number she did the previous day.

How many sit-ups will Jenna do on the day that Alex does 20 sit-ups?

You can use **numerical patterns** to help you solve the problem.

Each day, Alex does 2 sit-ups more than the day before. 0, 2, 4, 6, 8, 10, ...	The rule is add 2.	Each day, Jenna does 6 sit-ups more than the day before. 0, 6, 12, 18, 24, 30, ...	The rule is add 6.

Each day is a term in the pattern. The matching terms are **corresponding terms**

corresponding terms

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
Alex	0	2	4	6	8	10
Jenna	0	6	12	18	24	30

× 3

The number of sit-ups Jenna does is always 3 times the number of sit-up Alex does.

Use the relationship to solve the problem.

$20 \times 3 = 60$

Jenna does 60 sit-ups on the day that Alex does 20.

Math is... **Connections**

How is this relationship connected to the rules for Alex's and Jenna's numeric patterns?

You can identify a relationship between corresponding terms in two numerical patterns.

Work Together

On the day that Jenna did 54 sit-ups in a day, how many sit-ups did Alex do?

18 sit-ups

Use the information given for Exercises 1–8.

Quentin and Tyler are running laps on the school track. Each time they complete a lap, they do jumping jacks.

They both do 0 jumping jacks after the first lap.

Each lap, Quentin adds 1 jumping jack to the number of jumping jacks he did after the lap before.

Each lap, Tyler adds 4 jumping jacks to the number of jumping jacks he did after the lap before.

1. What is the rule for Quentin's numerical pattern?

add 1

2. What is the rule for Tyler's numerical pattern?

add 4

3. Write the first 5 terms of Quentin's numerical pattern.

0, 1, 2, 3, 4

4. Write the first 5 terms of Tyler's numerical pattern.

0, 4, 8, 12, 16

5. When Quentin does 4 jumping jacks after a lap, how many jumping jacks will Tyler do after that same lap?

16 jumping jacks

6. What is a relationship between corresponding terms in the two numerical patterns?

Multiply the number in Quentin's pattern by 4. The product is the number in Tyler's pattern.

7. How many jumping jacks will Tyler do after the lap when Quentin does 8 jumping jacks?

32 jumping jacks

8. How many jumping jacks will Quentin do after the lap when Tyler does 40 jumping jacks?

10 jumping jacks

Use Numerical Patterns A and B for Exercises 9–12.

Numerical Pattern A: 0, 2, 4, 6, 8, 10, 12

Numerical Pattern B: 0, 6, 12, 18, 24, 30, 36

9. What is the rule for Pattern A?

add 2

10. What is the rule for Pattern B?

add 6

11. What is a relationship between the corresponding terms in the two numerical patterns?

Multiply the number in Pattern A by 3 and the product is the number in Pattern B.

12. When the number in Pattern A is 28, what will be the number in Pattern B? 84

13. Extend Your Thinking Write two numerical patterns where a relationship between the corresponding terms is to multiply by 6. Start at 0 and write the first five terms for each numerical pattern and the rule for each numerical pattern.

Sample answer: 0, 2, 4, 6, 8 and 0, 12, 24, 36, 48; The rule for the first numerical pattern is add 2; The rule for the second numerical pattern is add 12.

Reflect

Relate Numerical Patterns

Be Curious

What do you notice?
What do you wonder?

Pattern A: 0, 2, 4, 6, 8, 10, ...

Pattern B: 0, 8, 16, 24, 32, 40, ...

Math is... Mindset

How do you show others you respect their ideas?

Learn

Pattern A starts at 0 and adds 1 to each term.

Pattern B starts at 0 and adds 5 to each term.

How can you determine a relationship between corresponding terms of these numerical patterns?

You can use a table to identify a relationship between the patterns.

Pattern A +1	Pattern B +5
0	0
1	5
2	10
3	15
4	20

Each term in Pattern B is 5 times as much as its corresponding term in Pattern A. You can use this relationship to determine unknown terms.

Math is... Structure

How are the terms in Pattern A related to their corresponding terms in Pattern B?

If 10 is a term in Pattern A, what is its corresponding term in Pattern B?

$10 \times 5 = t$

$t = 50$

If 70 is a term in Pattern B, what is its corresponding term in Pattern A?

$c \times 5 = 70$

$c = 14$

You can organize numerical patterns in a table to help you identify and describe relationships between corresponding terms.

Work Together

How can you determine a relationship between corresponding terms of these two numerical patterns?

Pattern A starts at 0 and adds 3 to each term.

Pattern B starts at 0 and adds 6 to each term.

The terms in Pattern B are 2 times as much as the terms in Pattern A.

Describe a relationship between corresponding terms in Patterns A and B.

1. Pattern A starts at 0 and adds 4 to each term.
Pattern B starts at 0 and adds 2 to each term.

   The terms in Pattern A are 2 times as much as the corresponding terms in Pattern B.

2. Pattern A starts at 0 and adds 3 to each term.
Pattern B starts at 0 and adds 9 to each term.

   The terms in Pattern B are 3 times as much as the corresponding terms in Pattern A.

3. Pattern A starts at 0 and adds 20 to each term.
Pattern B starts at 0 and adds 5 to each term.

   The terms in Pattern A are 4 times as much as the terms in Pattern B.

Use the table to answer Exercises 4–6.

4. Fill in the unknown terms in the table.

Pattern A +2	Pattern B +8
0	0
2	8
4	16
6	24
8	32

5. What is a relationship between the corresponding terms in Patterns A and B?

   Multiply the term in pattern A by 4 and the product is the term in Pattern B.

6. If a term in Pattern A is 20, what will be its corresponding term in Pattern B? **80**

7. Pattern A starts at 0 and adds 1 to each term. Pattern B starts at 0 and adds 6 to each term. If 5 is a term in Pattern A, what is its corresponding term in Pattern B? **30**

8. Pattern A starts at 0 and adds 4 to each term. Pattern B starts at 0 and adds 8 to each term. If 24 is a term in Pattern A, what is its corresponding term in Pattern B? **48**

9. Pattern A starts at 0 and adds 3 to each term. Pattern B starts at 0 and adds 12 to each term. If 72 is a term in Pattern B, what is its corresponding term in Pattern A? **18**

10. **STEM Connection** Saffron is baking bread. She wrote these numerical patterns to record the amount of water and flour needed.
Water (in cups): 3, 4, 5, 6, ...
Flour (in cups): 6, 8, 10, 12, ...
How many cups of water is needed when using 48 cups of flour? **24 cups of water**

11. **Extend Your Thinking** A relationship between terms is that a term in Pattern A is $\frac{5}{4}$ times as much as its corresponding term in Pattern B. What could be the rules for each numerical pattern?
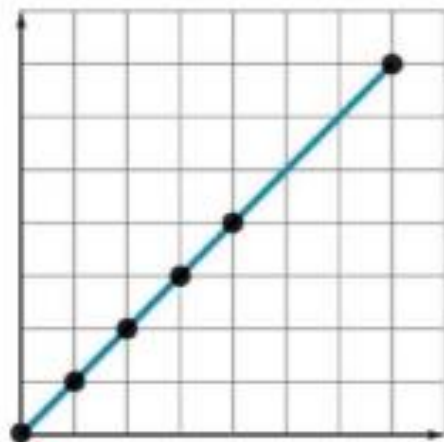
   Sample answer: The rule for Pattern A is add 5; the rule for Pattern B is add 4.

Graphs of Numerical Patterns

Be Curious

What math do you see?

Learn

Martin wants to rent a bike for 7 days. The cost to rent a bike is $20 each day.

How can you determine how much it should cost Martin to rent a bike for 7 days?

You can make a 2-column table.

The first column shows the number of days of a rental.

The second column shows the cost of the bike rental.
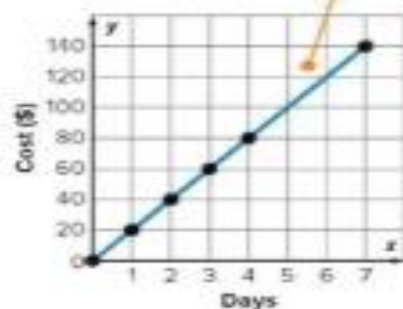
Bikes and Trikes Rental

Days	Cost ($)
0	0
1	20
2	40
3	60
4	80

+1   + 20

× 20

Math is... Modeling

How might writing the corresponding terms as ordered pairs help you solve this problem?

You can write corresponding terms as ordered pairs and plot the ordered pairs on a coordinate plane.

Draw a line to connect the points. Extend the line.

Renting a bike for 7 days costs $140.

Work Together

How much should it cost for Martin to rent a bike for $4\frac{1}{2}$ days? Explain your reasoning.

$90; Sample answer: You can use the relationship, $4\frac{1}{2} \times 20 = 90$.

1. The Scooters and Stuff Rental charges are shown in the table. Write the corresponding terms as ordered pairs and plot them on the coordinate plane.

Scooters and Stuff Rental		
Days	Cost ($)	Ordered Pair
0	0	(0, 0)
1	5	(1, 5)
2	10	(2, 10)
3	15	(3, 15)
4	20	(4, 20)

2. What is the rule for the pattern in the Days column of the table?

add 1

3. What is the rule for the pattern in the Cost ($) column of the table?

add 5

4. What is a relationship between the corresponding terms in the table?

Multiply days by 5.

5. How much should it cost to rent a scooter for 8 days?

$40

6. Write the ordered pair and plot the point on the coordinate plane for 8 days.

(8, 40); Check students' work.

7. How much should it cost to rent a scooter for $6\frac{1}{2}$ days?

$32.50

8. **STEM Connection** Malik learns that the light from a laser is stronger when the current is stronger. He is helping to make a laser where the rule for the current is add 10, and the rule for the light strength is add 2. Write the corresponding terms in a table, and then plot the points on the coordinate plane.

Check students' work.

9. **Extend Your Thinking** How does graphing numerical patterns help you understand the relationship between the patterns?

Answers may vary.

Unit Review

Vocabulary Review

Choose the correct word(s) to complete the sentence.

corresponding term	grouping symbols	order of operations
evaluate	numerical expression	parentheses
expression	numerical pattern	rule

1. A(n) **rule** can be used to create a numerical pattern. (Lesson 14-5)

2. A(n) **numerical expression** represents a number using only numbers and symbols, but not unknown values. (Lesson 14-1)

3. The rules that dictate the sequence in which the operations in an expression should be evaluated are called the **order of operations**. (Lesson 14-3)

4. When you **evaluate** an expression, you calculate a value for the expression. (Lesson 14-3)

5. A(n) **expression** can consist of numbers, operations, symbols, and unknown values. (Lesson 14-3)

6. A(n) **numerical pattern** is a sequence of numbers generated by a rule. (Lesson 14-4)

7. **Grouping symbols** are used to show where the group begins and where it ends. (Lesson 14-2)

8. **Corresponding terms** are numbers in numerical patterns that appear in identical places. (Lesson 14-5)

9. The grouping symbol ( ), called **parentheses**, is used in an expression so it is evaluated first. (Lesson 14-2)

Review

10. What numerical expression represents *three more than seven*? (Lesson 14-1) **7 + 3**

11. What operation is performed first? (Lesson 14-3)

    $8 + 16 \div 4 - 2$

    division

12. What are the rules for Pattern C and Pattern D? What is the relationship between the corresponding terms of Pattern C and Pattern D? (Lesson 14-5)

Pattern C	Pattern D
0	0
1	12
2	24
3	36
4	48

Pattern C: add 1, Pattern D: add 12. Multiply the terms in Pattern C by 12 to find the corresponding terms in Pattern D.

13. What is a verbal description for the numerical expression $100 + (5 \times 10)$? (Lesson 14-2)

Sample answer: one hundred more than five multiplied by ten.

14. What expression represents *twelve less than eighteen*? (Lesson 14-1)

18 − 12

15. What is a verbal description for the numerical expression $10 - (8 \div 4)$? (Lesson 14-2)

Sample answer: ten minus the quotient of eight and four.

16. What operation is performed first? (Lesson 14-3)

    $12 \times (4 + 6) \div 6$

    addition

17. What is the value of the expression? (Lesson 14-3)

    $5 \times 25 - 18 \times 2$ **89**

18. Jared and Robert are playing different video games. Jared passes 2 levels each time he plays. Robert passes 3 levels each time he plays. When Jared passes 8 levels, how many levels will Robert have passed playing the same number of times? (Lesson 14-4) **12 levels**

19. Using words, compare these expressions. (Lesson 14-2)

    $(8 \times 4) + 6$ $8 \times (4 + 6)$

Eight times the sum of four and six is greater than the sum of the product of eight and four plus six.

20. Cienna wants to know what she will earn mowing 8 lawns. The table shows the total amount she earns mowing different numbers of lawns.

Number of Lawns	Amount Earned ($)
0	0
1	30
2	60
3	90
4	120

a. How much will Cienna earn mowing 8 lawns? Use the coordinate plane to find the answer. (Lesson 14-5) **$240**

Lawn Mowing
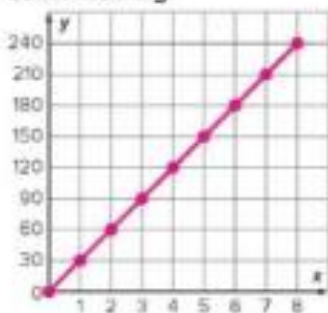
b. How much will Cienna earn mowing 12 lawns? (Lesson 14-6)

$360

21. What numerical expression represents *subtract eleven from twenty, then divide by three?* (Lesson 14-1) $(20 - 11) \div 3$

22. What is a verbal description for the numerical expression $(6 \div 2) + 3?$ (Lesson 14-2)

Sample answer: divide six by two, then add three.

23. What numerical expression represents *add three and six, then multiply by twenty?* (Lesson 14-1)

$(3 + 6) \times 20$

24. What is the value of the expression? (Lesson 14-3)

$6 \times (8 - 3) + 14$ **44**

25. Pattern A starts at 0 and adds 4. Pattern B starts at 0 and adds 8. What is the term for Pattern B when Pattern A's term is 24? (Lesson 14-4) **48**

26. What is the value of the expression? (Lesson 14-3)

$250 - (12 \times 5) - 10 \times 2$ **170**

Performance Task

Malik has programmed a light show for a concert that will be played against a rectangular shaped screen above the stage.

Part A: Each time he flashes lights, Malik flashes red lights 2 more times and blue lights 3 more times. Start at 0 and write the next 4 terms of the sequences for the red and blue lights.

red lights: 0, 2, 4, 6, 8, ...
blue lights: 0, 3, 6, 9, 12, ...

Part B: The table shows the horizontal and vertical distances of a photograph in feet from the bottom left corner as it moves across the screen.

Horizontal Distance (ft)	Vertical Distance (ft)
0	0
1	4
2	8
3	12

What is the rule for the Horizontal Distance and Vertical Distance? What is the relationship between the corresponding terms in the Horizontal and Vertical Distances?

Horizontal Distance: add 1, Vertical Distance: add 4. Multiply the horizontal distance by 4 to find the corresponding term in vertical distances.

Reflect

How can I use expressions to find a relationship between two sets of number patterns?

Answers may vary.