7th Grade
March 3, 2021

Today we will:

-review HW

-work on color-by-answer factoring WS

-organize binder or work on study guide if done early

HOMEWORK:

Complete coloring WS if not done in class

Study guide completed in binder by Friday's binder check

ALEKS assignment:
60 min and 5 topics
due Monday by 11:59pm

March 3, 2021

UNIT 7
LESSON 5
VIDEO NOTES

"__Factoring__ an expression"

means we write the expression as a __product__ of its __factors__.

Use the steps to factor 15x + 10.

Step 1: Write the factors of the terms.	→	15x: 3, 5, x 10: 2, 5, 10
Step 2: Identify the GCF.	→	GCF=5
Step 3: Write each term as the product of the GCF and its remaining factors.	→	(5 x 3x) + (5 x 2)
Step 4: Apply the Distributive Property.	→	5(3x + 2)

Video notes:

More Examples: Factor each expression. You can use a factor tree or list factors here:

36x + 24 = 12 (3x + 2)

6 + 3x = 3 (2 + x)

4x + 9 = cannot be factored

12 + 18x = 6 (2 + 3x)

24 + 32x = 8 (3 + 4x)

Word Problems:

The area of a high school basketball court is (50x-300) square feet. Factor 50x-300 to find possible dimensions of the basketball court.

50(x - 6)

So dimensions could be 50 feet by (x - 6) feet.

Jesse wants to put down $100 toward a new computer and will pay it off in six months. If y is the monthly payment, what expression represents the total price?

100 + 6y

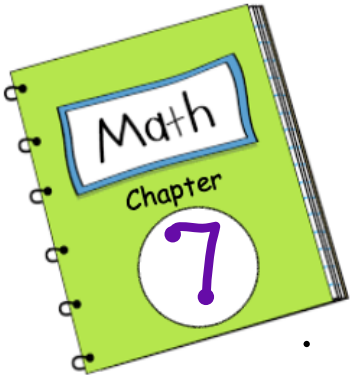
2(50 + 3y)

The Reyes family has saved $480 as a down payment for a new TV. If x is the monthly payment for one year, what expression represents the total cost of the television?

480+12x

12(40+x)

Factor this expression.



TITLE: Linear Expressions

Date	Lesson	Topic/Assignment
Feb 8	1	Distributive Property Video Notes
Feb 9	1	HOMEWORK: pg295
Feb 10	2	Simplifying Algebraic Expressions Video Notes
Feb 11	2	HOMEWORK: HW Practice WS
Feb 12	2	More Notes and Examples
Feb 17	2	Practice WS
Feb 19	3	Adding Expressions Video Notes
Feb 19	3	HW Practice WS 8Qs
Feb 22	3	CLASSWORK: Matching Activity
Feb 23	4	Subtracting Expressions Video Notes
Feb 23	4	HOMEWORK: Skills Practice WS
Feb 24	4	CLASSWORK: HW Practice WS
Feb 26	4	HOMEWORK: Extra Practice WS
Feb 26	4	CLASSWORK: QR Code Scavenger Hunt
March 2	5	Factoring Expressions Video Notes
March 3	5	HOMEWORK: HW Practice WS
March 4	5	CLASSWORK: Color-by-Answer WS
March 5	ALL	Unit 7 Study Guide

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Lesson 5 Homework Practice

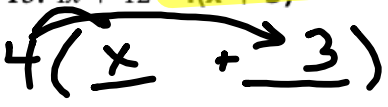
Factoring Linear Expressions

Find the GCF of each pair of monomials.

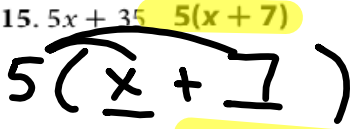
1. 20, $45x$ 5
2. $15r$, 25 5
3. $8xy$, $14x$ $2x$
4. $30w$, $70w$ $10w$
5. $4st$, $12s$ $4s$
6. $11gh$, $33g$ $11g$
7. $16mn$, $24m$ $8m$
8. $25f$, $60g$ 5
9. $33c$, $55cd$ $11c$
10. $50j$, $75jk$ $25j$
11. $27cd$, $72cde$ $9cd$
12. $48t$, $60st$ $12t$

Factor each expression. If the expression cannot be factored, write *cannot be factored.* Use algebra tiles if needed.

13. $4x + 12$ $4(x + 3)$



14. $8r - 14$ $2(4r - 7)$
15. $5x + 35$ $5(x + 7)$



16. $7 + 14x$ $7(1 + 2x)$
17. $32x - 15$ cannot be factored
18. $24 + 32x$ $8(3 + 4x)$
19. $6x - 9$ $3(2x - 3)$
20. $48 + 24x$ $24(2 + x)$
21. $72 - 18x$ $18(4 - x)$
22. $25x + 14$ cannot be factored
23. The rectangle shown below has a total area of $(4x + 36)$ square feet. Factor $4x + 36$. $4(x + 9)$

$4x$	36

24. The Art Club receives \$10 plus \$2 for every sculpture they sell for a fundraiser. The expression $2x + 10$ represents the amount the Art Club receives if they sell x sculptures. Factor $2x + 10$. $2(x + 5)$

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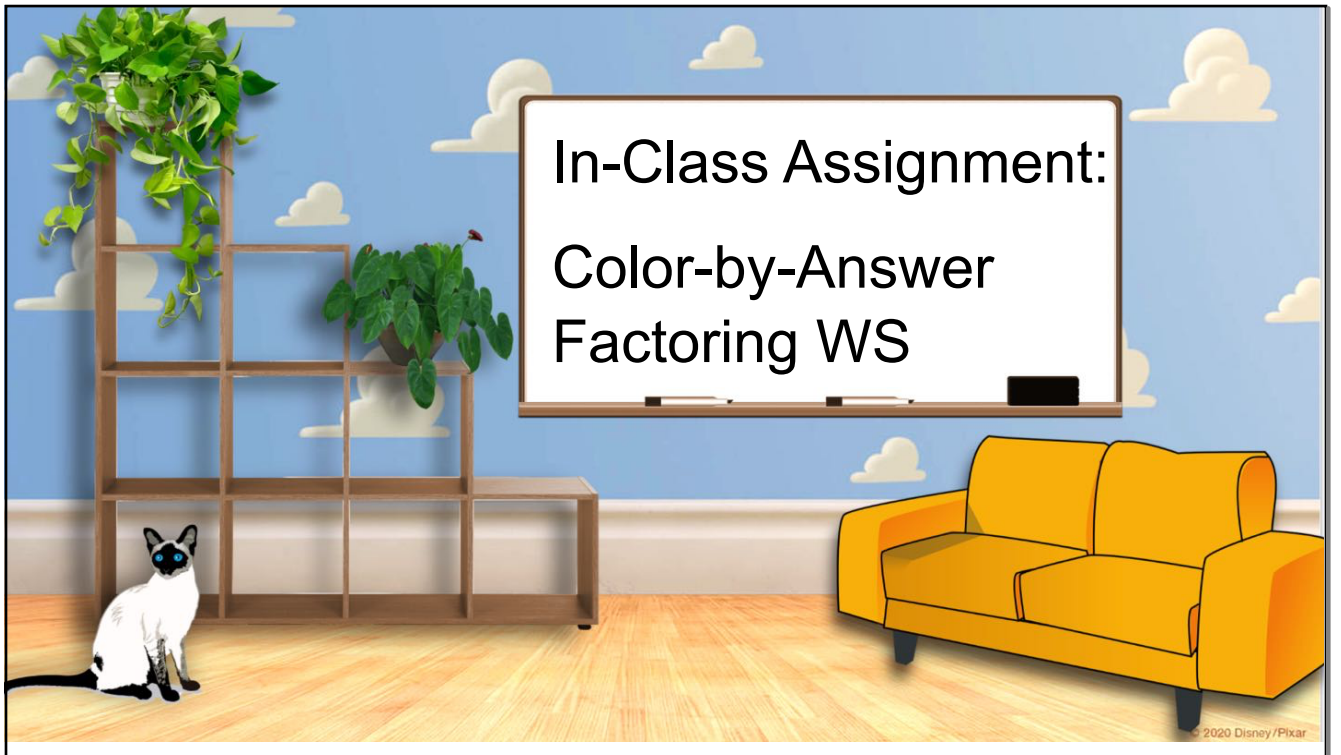
In-Class Assignment:
Color-by-Answer
Factoring WS
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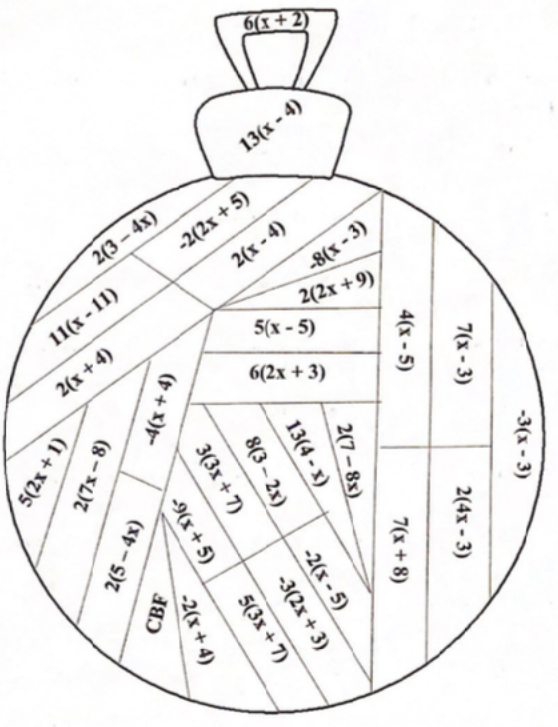
Factoring Practice - Coloring!

Factor each expression completely. Then, find your answer on the corresponding ornament and color!

1. $2x - 8$ purple
2. $-3x + 9$ green
3. $12x + 18$ purple
4. $2x + 8$ yellow
5. $13x - 52$ yellow
6. $-4x - 16$ red
7. $8x - 6$ purple
8. $9x + 21$ orange
9. $14x - 16$ orange
10. $-2x - 8$ blue
11. $7x - 21$ blue
12. $52 - 13x$ orange
13. $10x + 5$ red
14. $-6x - 9$ orange
15. $4x + 18$ green
16. $-4x - 10$ green
17. $6x + 12$ yellow
18. $4x - 20$ green
19. $11x - 121$ blue
20. $6 - 8x$ purple
21. $5x - 25$ blue
22. $-8x + 24$ yellow
23. $7x + 56$ yellow
24. $24 - 16x$ red
25. $10 - 8x$ red
26. $14 - 16x$ red
27. $15x + 35$ yellow
28. $-9x - 45$ green
29. $-2x + 10$ red
30. $8x - 7$ purple

$2(x - 4)$

$-3(x - 3)$



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IN THIS CLASSROOM WE DON'T give up, BUT WE DO give our best effort
Welcome to our class
HARD WORK PAYS OFF
WELCOME
7th Grade
Homework
Color-by-Answer Factoring Worksheet
ALEKS due Monday night

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Name _____ Date Due _____

STUDY GUIDE CH7 LINEAR EXPRESSIONS 7th GRADE

Complete the work inside the boxes under the problem. Circle your answer.

1. Name the following in this expression: $3x + 4y + 6 - 2x + 5$ Terms: Like terms: Coefficients: Constants:	2. Use the Distributive Property to write this expression as an equivalent algebraic expression. $-8(x - 3y)$	3. Use the Distributive Property to write this expression as an equivalent algebraic expression. $4(x + 5)$
4. Use the Distributive Property to write this expression as an equivalent algebraic expression. $(3 + b)(-5)$	5. Use the Distributive Property to write this expression as an equivalent algebraic expression. $-7(y + 6)$	6. Simplify. $-10 - 6w + 7 - w$
7. Simplify. $10c - 3(2 - c)$	8. Simplify. $12f + 7g - 2(8f + 4)$	9. Simplify. $9 - 6(3x + 2y) + 4x$

10. Add.

$6x + 9) + (-x - 6)$

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11. Add. $(5x - 6) + (-x + 2)$	12. Add. (-6x + 3) + (8x - 5)	13. Subtract. $(-3x + 2) - (-4x - 5)$
14. Subtract. $(9x - 5) - (-3x + 3)$	15. Find the GCF of each pair of monomials. $30x, 12x$	16. Find the GCF of each pair of monomials. $20a, 10ab$
17. Factor each linear expression. If the expression cannot be factored, write cannot be factored. $55x + 11$	18. Factor each linear expression. If the expression cannot be factored, write cannot be factored. 42x + 14xy	19. Factor each linear expression. If the expression cannot be factored, write cannot be factored. 12r - 17

20. The side lengths of a triangle are given by the expressions $7x - 3$, $9x - 3$, and $9x - 4$. Write and simplify a linear expression for the perimeter of the triangle.