Lesson 8 - Factoring (Part 2)

LEARNING GOALS:

•

DE	1//	Œ	Ш
KE	V I		'I' F

1	Relation:		
	i Cialion.		

I need 2 integers that:

- Add to Equal:
- Multiply to Equal:

$\nu =$	()(

Factors of:	Sum

TIPS AND TRICKS:

If c is Positive, I am looking for:	If c is negative, I am looking for:

PRACTICE, PRACTICE, PRACTICE!

1. Complete the table:

Multiply to	Add to	All possible factor pairs , circle the correct one
20	9	
21	-10	
6	5	
6	-7	
2	3	
28	-11	
-15	2	

					_	_
2 '	Write	each	equation	in	factored	form:

a) Relation: $y = x^2 + 5x + 6$

= C=

I need 2 integers that:

- Add to Equal:
- Multiply to Equal:

$$y = ()()$$

Factors of:	Sum

b) Relation: $y = x^2 + 7x + 6$ $b = _____$

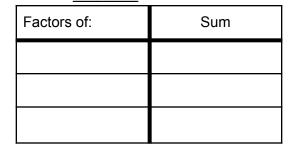
I need 2 integers that:

- Add to Equal:
- Multiply to Equal:

$$y = ()()$$

c) Relation: $y = x^2 - 8x + 12$

c + 12 b = ____



I need 2 integers that:

Add to Equal:

• Multiply to Equal:

$$y = ()()$$

c =	

Factors of:	Sum

d) Relation: $y = x^2 + 4x - 5$	b =	c =	
I need 2 integers that:		Factors of:	Sum
Add to Equal:			
Multiply to Equal:			
y = ()()			
e) Relation: $y = x^2 - 7x + 12$	b =	c =	
I need 2 integers that:		Factors of:	Sum
Add to Equal:			
Multiply to Equal:			
y = ()()			
f) Relation: $y = x^2 - 2x - 15$	b =	c =	
I need 2 integers that:		Factors of:	Sum
Add to Equal:			
Multiply to Equal:			
y = ()()			
g) Relation: $y = x^2 - 5x - 24$	b =	c =	
I need 2 integers that:		Factors of:	Sum
Add to Equal:			
Multiply to Equal:			
y = ()()			
h) Relation: $y = x^2 + 4x - 60$	b =	c =	
I need 2 integers that:		Factors of:	Sum
Add to Equal:			
Multiply to Equal:			
y = ()()			

Given the standard form of the quadratic relation, identify the value of the sum and product needed to factor. Express the relation in factored form, identify the x-intercepts and y-intercept, and use these results to make a sketch of each parabola.

	Standard Form	Product and Sum	Factor Pair	Factored Form	x-intercepts	y-intercept
A	$y = x^2 + 6x + 5$	$r \times s = 5$ $-(r+s) = 6$	1 and 5	y = (x + 1)(x + 5)	-1 and -5	5
В	$y = x^2 - 4x - 5$	$r \times s = -(r+s) =$				
С	$y = x^2 + 4x - 5$	$r \times s = -(r+s) =$				
D	$y = x^2 - 6x + 5$	$r \times s = -(r+s) =$				
E	$y = x^2 + 7x + 6$	$r \times s = -(r+s) =$				
F	$y = x^2 - 6x + 9$	$r \times s = -(r+s) =$				
G	$y = x^2 - x - 6$	$r \times s = -(r+s) =$				
н	$y = x^2 + 13x +$	$r \times s = -(r+s) =$				
I	$y = x^2 - 4x - 1$	$r \times s = -(r+s) =$				
J	$y = x^2 + x - 12$	$r \times s = -(r+s) =$				

Sketch of the relation

