Name: Unit 7C Day 33. Factor	Date:	Hour: Alg 1
Focus Question: How do I quic	kly factor a special case?	(Special Case of Factoring)
A. Use the following expression $x^2 = 6$	essions $x^2 - 25 \qquad 4x^2 - 3$	0 ² -4(1)(1) 0 ¹ -576 6 576 x ² +6 0 ² -64
1. What do all 4 expressions ha	ve in common?	
binomials	xª Hebis O	
2. Only two of the expressions	can be factored, which two?	25-85 and 4x - 36 - 9
3. Factor those two expressions	b*-4ac -5x+5x-	1.85 4(x ² -9)
	X(X)+X-5)+300	
	X(x-6)+5(x- (x-5)(x+5	
1 XX7hat da than a tarr	(x-5)(x+5)	4(x+3)(x-3)
	inal expressions have in common?	
	sindmals b=0	
	a hegative pri	
	also a pretise	
	ed expressions have in common?	
	# Xx - #)	
B. Difference of squares The two expressions x^2 squares." Meaning it co	-25 and $4x^2 - 36$ are examples of a uld always be re-written as $a^2 - b^2$ are	a special case called "The difference of and its factors will always be $(a + b)(a - b)$.
Factor each of the follow	wing. (Remember, the first thing you	should always look for is the <u>CCF</u> .
1. $x^2 - 144$	2. $k^2 - 225$	3. $9x^2 - 1$
	W-15 ²	$(3\times 3^2 - 1^2)$
(X-12)(X+12)	(K-15)KH3)	(3x-1)/3x+/)

$$\frac{4.4n^2-49}{(2h)^2-7^2}$$

$$\frac{(2h)^2-7(2n+7)}{(2n-7)(2n+7)}$$

$$3(n^2-75)$$
 $3(n^2-25)$
 $3(n^2-5^2)$
 $3(n-5)(n+5)$

6.
$$24x^3 - 54x$$

 $6x(4x^2 - 9)$
 $6x(2x)^2 - 3^2$
 $6x(2x - 3)(2x + 3)$

$$\frac{7. a^{2}-25b^{2}}{a^{2}-(5b)^{2}}$$

$$(a-5b)(a+5b)$$

8.
$$4x^2 + 49y^2$$
9. $\frac{1}{4}s^2 - 1$
60 8 Nortcut: $(\frac{1}{2}s)^2 - 1^2$

9.
$$\frac{1}{4}s^2 - 1$$

 $(\frac{1}{2}S)^2 - 1^2$
 $(\frac{1}{2}S - 1)(\frac{1}{2}S + 1)$

Reverse REMONS C. The difference between factoring and solving Just because an expression can't be factored doesn't mean it can't be solved! Remember, you have other methods like quadratic formula or complete the square

1. Factor
$$a^2 + 16$$

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2. Solve
$$a^2 + 16 = 0$$

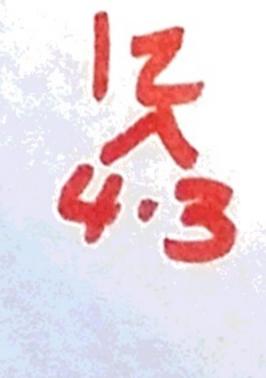
$$\sqrt{a^2 + 16}$$

$$\sqrt{a^2 + 16}$$



3. Factor
$$b^2 - 12$$

4. Solve
$$b^2 - 12 = 0$$



5. Factor
$$d^2 + 2d - 1$$

S. Factor
$$d^2 + 2d - 1$$

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Factor

6. Solve
$$d^2 + 2d - 1 = 0$$

Solve
$$d^2 + 2d - 1 = 0$$