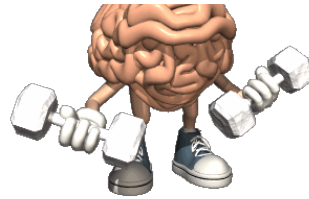


# Warm Up



Factor

a)  $10x^2 + 13x - 3$

1st last	mid
mul	add
-30	+13
-1 x+30	
<b>-2 x+15</b>	
-3 x+10	
-5 x+6	

sign on largest  
diff

$$= 10x^2 - 2x + 15x - 3$$

$$= 2x(5x - 1) + 3(5x - 1)$$

same ∴

$$= (5x - 1)(2x + 3)$$

b)  $x^2 + 7x$   
 $x(x + 7)$

c)  $x^2 - 15x + 36$

simple	mul	add
	+36	-15
•	1x-36	
•	2x-18	
•	<b>3x-12</b>	
•	4x-9	
•	6x-6	

$$(x - 3)(x - 12)$$

## Check

- 1) GCF
- 2) Simple Trinomial
- 3) Hard Trinomial

Math 10B

Name \_\_\_\_\_

## Extra practice

solutions to  
yesterday

HW \_\_\_\_\_

## Factoring: Hard Trinomials

Factor each completely.

1)  $6m^2 + 2m - 8$

2)  $3x^2 - 16x + 5$

3)  $28r^2 - 116r + 16$

4)  $2n^2 - 17n - 9$

5)  $3r^2 + 2r - 16$

6)  $5a^2 - 34a + 45$

7)  $8x^2 - 50x + 50$

8)  $4n^2 - 15n + 9$

9)  $4x^2 + 17x + 4$

10)  $4m^2 + 13m + 10$

11)  $4b^2 - 3b - 10$

12)  $8n^2 - 26n - 24$

13)  $u^2 + 16uv + 64v^2$

14)  $2x^2 - 22xy + 48y^2$

15)  $x^2 - 11xy + 30y^2$

16)  $4a^2 - 8ab - 12b^2$

## Answers to Factoring: Hard Trinomials (ID: 1)

1)  $2(3m + 4)(m - 1)$

2)  $(3x - 1)(x - 5)$

3)  $4(7r - 1)(r - 4)$

4)  $(2n + 1)(n - 9)$

5)  $(3r + 8)(r - 2)$

6)  $(5a - 9)(a - 5)$

7)  $2(x - 5)(4x - 5)$

8)  $(n - 3)(4n - 3)$

9)  $(x + 4)(4x + 1)$

10)  $(m + 2)(4m + 5)$

11)  $(b - 2)(4b + 5)$

12)  $2(n - 4)(4n + 3)$

13)  $(u + 8v)^2$

14)  $2(x - 8y)(x - 3y)$

15)  $(x - 5y)(x - 6y)$

16)  $4(a - 3b)(a + b)$

$$2) 3x^2 - 16x + 5$$
$$(3x - 1)(x - 5)$$

$$4) 2n^2 - 17n - 9$$
$$(2n + 1)(n - 9)$$

$$6) 5a^2 - 34a + 45$$
$$(5a - 9)(a - 5)$$

$$8) 4n^2 - 15n + 9$$
$$(n - 3)(4n - 3)$$

$$10) 4m^2 + 13m + 10$$
$$(m + 2)(4m + 5)$$

$$12) 8n^2 - 26n - 24$$
$$2(n - 4)(4n + 3)$$

$$14) 2x^2 - 22xy + 48y^2$$
$$2(x - 8y)(x - 3y)$$

$$16) 4a^2 - 8ab - 12b^2$$
$$4(a - 3b)(a + b)$$

## 3.6 Polynomials of the Form $ax^2 + bx + c$

# Homework

## Mid Unit Review

More

Worksheet: GCF, Simple Trinomials & Hard Trinomials  
Questions: 1-12

Math 10

Name Dot

GCF, Simple Trinomials, Hard Trinomials

Date Oct 17<sup>th</sup>

Choose a factoring Method and factor each completely:

1)  $-9n^5 + 6n^3$

$3n^3(-3n^2 + 2)$

2)  $36r^6 + 54r - 45$

3)  $-40 + 4b^2 - 32b^4$

4)  $4xy^2 + 20x^2y + 16xy$

5)  $x^2 + 13x + 42$

6)  $x^2 + 13x + 36$

7)  $k^2 + k - 12$

8)  $a^2 + 4a - 45$

9)  $2p^2 + 11p - 63$

10)  $3n^2 + 11n - 20$

11)  $4n^2 - 4n - 15$

12)  $6n^2 - 29n + 20$

## Answers:

### Answers to GCF, Simple Trinomials, Hard Trinomials

- |                      |                       |                          |                       |
|----------------------|-----------------------|--------------------------|-----------------------|
| 1) $3n^3(-3n^2 + 2)$ | 2) $9(4r^6 + 6r - 5)$ | 3) $4(-10 + b^2 - 8b^4)$ | 4) $4xy(y + 5x + 4)$  |
| 5) $(x + 6)(x + 7)$  | 6) $(x + 9)(x + 4)$   | 7) $(k + 4)(k - 3)$      | 8) $(a - 5)(a + 9)$   |
| 9) $(2p - 7)(p + 9)$ | 10) $(3n - 4)(n + 5)$ | 11) $(2n + 3)(2n - 5)$   | 12) $(n - 4)(6n - 5)$ |



Factoring Review

Name \_\_\_\_\_

## Math 10 (Numbers, Functions and Relations 10)

**Factor the common factor out of each expression.**

1)  $20r^5 + 4r^2 - 40$

2)  $-5x^3 - 5x^2 - 5x$

3)  $12n^5 - 48n^2 + 42n$

4)  $-56a^7 + 48a^6 + 16a^3$

**Factor each completely.**

5)  $x^2 + x - 56$

6)  $6n^2 - 6n - 120$

7)  $4k^2 - 24k - 28$

8)  $x^2 - 3x - 18$

9)  $b^2 - 7b - 8$

10)  $a^2 + 13a + 30$

11)  $30n^2 - 24n - 72$

12)  $5x^2 - 21x - 54$

13)  $16n^2 - 164n + 288$

14)  $54x^2 - 90x$

15)  $4x^2 + 6x$

16)  $6n^2 - 5n + 1$

17)  $4r^2 + 7r - 2$

18)  $4n^2 - 4n - 35$

19)  $6v^2 - 14v$

## Answers to Math 10 (Numbers, Functions and Relations 10)

1)  $4(5r^5 + r^2 - 10)$

2)  $-5x(x^2 + x + 1)$

3)  $6n(2n^4 - 8n + 7)$

4)  $8a^3(-7a^4 + 6a^3 + 2)$

5)  $(x + 8)(x - 7)$

6)  $6(n - 5)(n + 4)$

7)  $4(k + 1)(k - 7)$

8)  $(x - 6)(x + 3)$

9)  $(b - 8)(b + 1)$

10)  $(a + 3)(a + 10)$

11)  $6(5n + 6)(n - 2)$

12)  $(5x + 9)(x - 6)$

13)  $4(n - 8)(4n - 9)$

14)  $18x(3x - 5)$

15)  $2x(2x + 3)$

16)  $(3n - 1)(2n - 1)$

17)  $(r + 2)(4r - 1)$

18)  $(2n + 5)(2n - 7)$

19)  $2v(3v - 7)$

Chapter 3 (Factors & Products) Review.pdf