

Test Tuesday
Apr. 9

Warm Up

1) Expand $3(2x+5)(x+4)$

$$\begin{aligned}
 & (6x + 15)(x + 4) \\
 & 6x^2 + 24x + 15x + 60 \\
 & 6x^2 + 39x + 60
 \end{aligned}$$

2) Factor

a) $30x^4y^7 - 24x^3y - 18x^2y$
 $6x^2y(5x^2y^6 - 4x - 3)$

c) $1 - 64t^2$ Diff of Sq.
 $(1 - 8t)(1 + 8t)$

e) $x^2 + 6x + 9$
 $(x + 3)^2$
 \downarrow
 $(x + 3)(x + 3)$

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

b) $14a - 12b$
 $2(7a - 6b)$

d) $2x^2 - x - 6$ Hard

$2x^2$	$-x$	-6
$+x$	$+6$	
mult		add
-12		-1
$+1x + 2$		
$+2x - 6$		
$+3x - 4$		

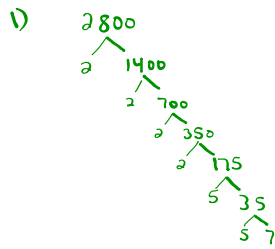
- 1) GCF
- 2) Simple
- 3) Hard
- 4) Diff of squares
- 5) Perfect square trinomial

Homework Solutions to

TEST REVIEW WORKSHEET

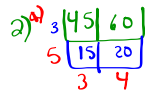


Test Review WS (Test Look-a-like)
NRF 10



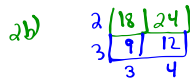
$$2800 = 2 \times 2 \times 2 \times 2 \times 5 \times 5 \times 7$$

$$= 2^4 \times 5^2 \times 7$$



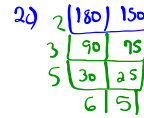
$$GCF(45,60) = 3 \times 5 = 15$$

$$LCM(45,60) = 3 \times 5 \times 4 \times 3 = 180$$



$$GCF(18,24) = 2 \times 3 = 6$$

$$LCM(18,24) = 3 \times 2 \times 3 \times 4 = 72$$



$$GCF(180,150) = 2 \times 3 \times 5 = 30$$

$$LCM(180,150) = 2 \times 3 \times 5 \times 6 \times 5 = 900$$

3) $-48x^4y^3 + 24x^2y^3 - 36x^2y$

GCF

$$12x^2y^3(-4x^2y^0 + 2x^0y^3 - 3)$$

4) $16y^2 + 11y + 8 + 5y^2 - 2y + 7$

$$16y^2 + 5y^2 + 11y - 2y + 8 + 7$$

$$21y^2 + 9y + 15$$

GCF

$$= 3(7y^2 + 3y + 5)$$

Hard trinomial that doesn't factor

mult	}	add
+35		+3
1x35		
5x7		

5) $k^2 - 16k + 28$

Simple trinomial

$$(k-2)(k-14)$$

mult	}	add
+28		-16
-1x-28		
-2x-14		
-4x7		

6) $(x \quad)(x + 7) = (x^2 + 5x - \square)$

one factor
STEP 2

add to get middle +5

$$(+7) + (?) = (-2)$$

STEP 3 multiply factors to get last

$$(x-2)(x+7) = (x^2 + 5x - 14)$$

Other factor

7) $64x^2 - \square x + 25$

$(8x)^2$ $(5)^2$

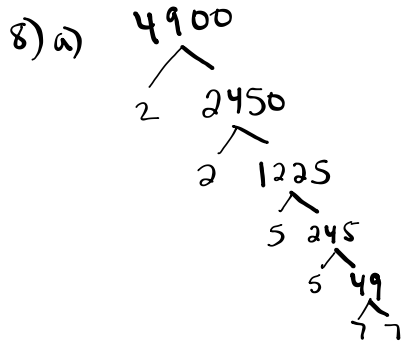
a b

$2ab$

$2(8x)(5)$

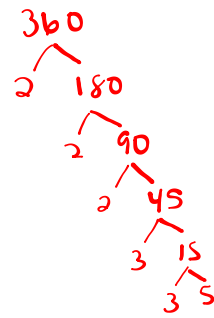
$\square 80x$

WS Solutions continued



$$4900 = 2^2 \times 5^2 \times 7^2$$

b)



$$360 = 2^3 \times 3^2 \times 5$$

9)

$$15x^5b^7 - 10x^3b^5 + 12x^3 - 7x^5b^7 + 30x^3b^5 + 8x^3$$

Collect like terms (add coefficients)

$$15x^5b^7 - 7x^5b^7 - 10x^3b^5 + 30x^3b^5 + 12x^3 + 8x^3$$

$$8x^5b^7 + 20x^3b^5 + 20x^3$$

Factor out GCF

$$4x^3 (2x^2b^7 + 5b^5 + 5)$$

10)

$$(3x+9)(4x-8)$$

$$12x^2 - 24x + 36x - 72$$

$$12x^2 + 12x - 72$$

10b)

$$(3x+4)(2x-7) + (-2x+4)(5x-3)$$

$$= 12x^2 - 21x + 8x - 28 + -10x^2 + 8x + 20x - 12$$

$$= (12x^2 - 13x - 28) + (-10x^2 + 28x - 12)$$

$$= -2x^2 + 15x - 30$$

Solutions to WS (test-look-a-like)

11a) $18x^5y^3 + 24x^7y^2 - 21x^3y^8 - 9x^2y^4$
 GCF
 $3x^2y^2 (6x^3y + 8x^5 - 7x^3y^6 - 3y^2)$

11b) $9m^2 - 16$ diff. of Squares
 $(3m-4)(3m+4)$

11c) $n^2 - 7n - 18$ simple trinomial
 $(n-9)(n+2)$

11d) $x^2 - 6x + 7$ Simple trinomial
 Does not factor

mult	add
+7	-6
-1x7	
add	-8

11e) $k^2 + 14k - 32$
 $(k+16)(k-2)$

11f) $3x^2 - 8x + 4$ (Hard trinomial)

mult	add
+12	-8
-1x12	
-2x6	
-8x4	

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

11g) $5x^2 - 17x - 12$ Hard trinomial
 Does Not factor

mult	add
-60	+17
+1x-60	
+2x-30	
+4x-15	
+5x-12	
+6x-10	

 Hudson
 A

11h) $x^2 - 14x + 49$ Simple or perfect square trinomial
 $(x-7)^2$
 No factor

11i) $2x^2 - 22x + 60$ GCF
 $= 2(x^2 - 11x + 30)$ Simple trinomial
 $= 2(x-5)(x-6)$

mult	add
+30	-11
-1x30	
-2x15	
-3x10	
-5x6	

11j) $25b^2 - 60b + 36$ perfect sq trinomial
 $(5b-6)^2$

11k) $12v^2 - 27$
 $= 3(4v^2 - 9)$ difference of sq.
 $= 3(2v-3)(2v+3)$

11l) $15x^2y^2 - 60xy$ GCF
 $15xy(xy-4)$

Homework Solutions to

4. Expand and simplify.

a) $(x + 2)^2$

b) $(3 - y)^2$

c) $(5 + d)^2$

d) $(7 - f)^2$

e) $(x + 2)(x - 2)$

f) $(3 - y)(3 + y)$

g) $(5 + d)(5 - d)$

h) $(7 - f)(7 + f)$



Homework Solutions to

5. Identify each polynomial as a perfect square trinomial, a difference of squares, or neither.

a) $25 - t^2$

b) $16m^2 + 49n^2$

c) $4x^2 - 24xy + 9y^2$

d) $9m^2 - 24mn + 16n^2$



6. Factor each binomial. Homework Solutions to

a) $x^2 - 49$

b) $b^2 - 121$

c) $1 - q^2$

d) $36 - c^2$



Attachments

Factoring TEST Review Worksheet (A Mix of Simple Hard & Special).pdf

Day 12.5_ Perfect Squares Test Review _HW Solutions to Day 12.notebook

Chapter 3 Test_2017_TEST REVIEW.doc