Homework Solutions to

TEST REVIEW WORKSHEET

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

1) 2800 = 2 × 1400 = 2 × 2 × 700 = 2 × 2 × 2 × 350 = 2 × 2 × 2 × 2 × 175 = 2 × 2 × 2 × 2 × 5 × 35 = 2 × 2 × 2 × 2 × 5 × 5 × 7

$2800 = 2^4 \times 5^2 \times 7$

2a)

3	45	60
5	15	20
	3	4

GCF(45,60) = 3 × 5 = 15

LCM(45,60) = 3 × 5 × 4 × 3 = 180

2b)

2	18	24
3	9	12
	3	4

GCF(18,24) = 2 × 3 = 6

LCM(18,24) = 3 × 2 × 3 × 4 = 72

2c)

2	180	150
3	90	75
5	30	25
	6	5

GCF(180,150) = 2 × 3 × 5 = 30

LCM(180,150) = 2 × 3 × 5 × 6 × 5 = 900

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

GCF

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

4) $16y^3 + 11y + 8 + 5y^2 - 2y + 7$

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

$21y^2 + 9y + 15$

GCF

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

Hard trinomial that doesn't factor

mult	add
+35	+3
1 × 35	
5 × 7	

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

Simple trinomial

$(x-2)(x-14)$

mult	add
+28	-16
-1 × -28	
-2 × -14	
-4 × -7	

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

Step 1: one factor

Step 2: add to get middle +5

$(+7) + (?) = +5$

$(?) = -2$

Step 3: multiply factors to get last

$(+7)(-2) = -14$

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

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

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

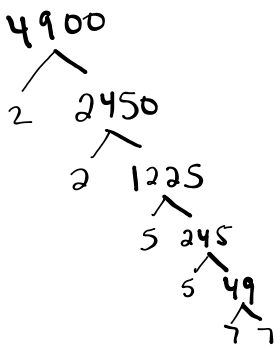
$2ab$

$2(8x)(5)$

$80x$

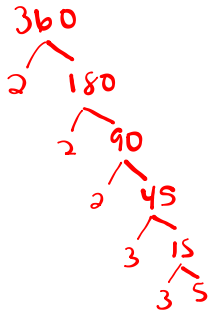
WS Solutions continued

8) a)



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

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) $18x^5y^3 + 24x^3y^2 - 21x^5y^8 - 9x^3y^4$

GCF

$3x^3y^2(6x^3y + 8x^5 - 7x^3y^6 - 3y^2)$

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: +7 add: -6

-1×-7 add -8

11e) $k^2 + 14x - 32$

$(k+16)(k-2)$

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

mult: +12 add: -8

-1×-12

-2×-6

-3×-4

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

$= 3x(x-2) - 2(x-2)$

$= (x-2)(3x-2)$

11g) $5x^2 - 17x - 12$ Hard trinomial

Does Not factor

mult: -60 add: $+17$

$+1 \times -60$

$+2 \times -30$

$+4 \times -15$

$+5 \times -12$

$+6 \times -10$

Not factor

Hudson 81

11h) $x^2 - 14x + 49$ Simple or perfect square trinomial

$(x-7)^2$

11i) $2x^2 - 22x + 60$

GCF

$= 2(x^2 - 11x + 30)$ simple trinomial

$= 2(x-5)(x-6)$

mult: +30 add: -11

-1×-30

-2×-15

-3×-10

-5×-6

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

$15xy(1xy - 4)$

Attachments

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

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

Chapter 3 Test_2017_TEST REVIEW.doc