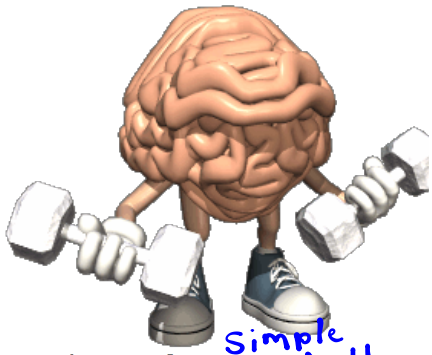
Test Thursday

Factoring Song

1) GCF
2) Simple Trinomial
3) Hard Tri
4) Difference Squares
5) Perfect Sq. Trinomial

Warm Up



1) $20 - 32a + 40a^3$

$4(5 - 8a + 10a^2)$

2) $x^2 + 4x + 3$

Simple: mult +3, add +4

$(x+1)(x+3)$

3) $10n^2 - 1n - 24$

Hard: 1st x last mult, middle add, -1

-240

$+1 \times -240$
$+2 \times -120$
$+3 \times -80$
$+4 \times -60$
$+5 \times -48$
$+6 \times -40$
$+8 \times -30$
$+10 \times -24$
$+12 \times -20$
$+15 \times -16$

$10n^2 + 15n - 16n - 24$

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

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

4) $5x^2 - 45x + 70$

$5(x^2 - 9x + 14)$

Simple: x, +14, -9

-1×-14
-2×-7

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

5) $49x^4 - 4$

$(7x^2)^2 - (2)^2$

$(7x+2)(7x-2)$

6) $x^2 + 100$

not subtract

Cannot factor

7) $49x^2 - 70x + 25$

perfect sq. · perfect square

$(7x-5)^2$

Perfect square trinomial

Check

$(7x-5)(7x-5)$

$49x^2 - 35x - 35x + 25$

$49x^2 - 70x + 25$

8) $9m^2 + 36m + 36$

$a = \sqrt{9}$ $b = \sqrt{36}$ $2ab$

$2 \cdot 3 \cdot 6 = 36$

$(3m)^2$ $(6)^2$

1

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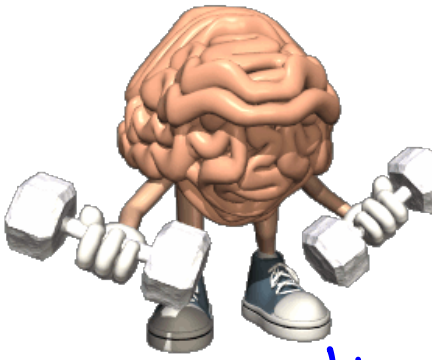
Warm Up



1) $20 - 32a + 40a^3$

$40a^3 - 32a + 20$

$4(10a^3 - 8a + 5)$

2) $x^2 + 4x + 3$

$(x+1)(x+3)$

x	+
+3	+4

3) $10n^2 - n - 24$

$10n^2 + 15n - 16n - 24$

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

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

x	+
-240	-1

1, 240
2, 120
3, 80
4, 60
5, 48
6, 40
8, 30
10, 24
12, 20
*15, -16

4) $5x^2 - 45x + 70$

$5(x^2 - 9x + 14)$

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

x	+
+14	-9

-2, -7

5) $49x^4 - 4$

$(7x^2)^2 - (2)^2$

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

6) $x^2 + 100$

DNF

7) $49x^2 - 70x + 25$

$(7x - 5)^2$

8) $9m^2 + \square m + 36$

$(3m)^2$ $\square$ $(6)^2$

36

$2(3)(6)m$

Any homework Questions???

Difference of Squares and Perfect Square Trinomials

Answers to Factoring: Difference of Squares and Perfect Squares (ID: 1)

1) $(n+3)(n-3)$	2) $(5a+3)(5a-3)$	3) $(k+2)(k-2)$	4) $(4x+3)(4x-3)$
5) $(x+5)(x-5)$	6) $(5x+4y)(5x-4y)$	7) $(u+4v)(u-4v)$	8) $(u+3v)(u-3v)$
9) $(2x+y)(2x-y)$	10) $(a+5b)(a-5b)$	11) $(3m+2)^2$	12) $(4r+1)^2$
13) $(5x-2)^2$	14) $(4n+5)^2$	15) $(3b-4)^2$	16) $(4m-3n)^2$
17) $(3x-y)^2$	18) $(5x+y)^2$	19) $(x-4y)^2$	20) $(3x+4y)^2$

Factoring Review Sheet

1) GCF
2) Simple Trinomial
3) Hard Trinomial
4) Perfect Square Trinomials
5) Difference of Squares

1) $m^2 - m - 72$

2) $n^2 - 14n + 48$

3) $-36n^4 + 20n^6 - 28n^8$

4) $-10n^2m^2 - 30mn^2 + 10n^2$

5) $4v^2 + 12v + 36$

6) $4n^2 - 20n + 25$

7) $3n^2 - 22n + 35$

8) $14m^2 - 2m - 16$

9) $16x^2 - 9$

10) $x^2 - 4$

11) $4x^2 + 4x + 1$

12) $9n^2 - 12n + 4$

13) $12n^2 - 72n$

14) $16b^2 - 28b - 8$

Solutions

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

2) $(n-6)(n-8)$

3) $-4n^4(9-5n^2+7n^4)$

4) $-10n^3(m^2+3m^2-1)$

5) $(2v+3)^2$

6) $(2n-5)^2$

7) $(n-5)(3n-7)$

8) $2(m+1)(7m-8)$

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

10) $(x-2)(x+2)$

11) $(2x-1)^2$

12) $(3n-2)^2$

13) $12n(n-6)$

14) $4(b-2)(4b+1)$

Attachments

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