Name: Answers! Class:

For each of the below, re-write in factored form.

Question 01

$2x^2 + 18x + 40$

$2(x^2+9x+20)$ — both pos; same

1	20
2	10
4	5

$2(x+4)(x+5)$

Question 02

$-x^2 + 2x + 15$

$-1(x^2-2x-15)$ — big neg; different

1	−15
3	−5

$-(x+3)(x-5)$

Question 03

$-2x^2 - 12x + 32$

$-2(x^2+6x-16)$ — big pos.; different

−1	16
−2	8
−4	4

$-2(x-2)(x+8)$

Question 04

$3x^2 - 27x + 42$

$3(x^2-9x+14)$ — same; both neg

−1	−14
−2	−7

$3(x-2)(x-7)$

Question 05

$-5x^2 - 55x - 50$

$-5(x^2+11x+10)$ — both pos; same

1	10
2	5

$-5(x+1)(x+10)$

Question 06

$-x^2 + 2x + 24$

$-1(x^2 - 2x - 24)$

	-24
1	-24
2	-12
3	-8
4	-6

$-(x+4)(x-6)$

Question 07

$2x^2 + 2x - 24$

$2(x^2 + x - 12)$

	-12
-1	12
-2	6
-3	4

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

Question 08

$-2x^2 + 22x - 56$

$-2(x^2 - 11x + 28)$

	28
-1	-28
-2	-14
-4	-7

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

Question 09

$-x^2 - 11x - 18$

$-1(x^2 + 11x + 18)$

	18
1	18
2	9
3	6

$-(x+2)(x+9)$

Question 10

$2x^2 - 14x - 60$

$2(x^2 - 7x - 30)$

	-30
1	-30
2	-15
3	-10
5	-6

$2(x+3)(x-10)$

Question 11

$-3x^2 - 39x + 90$

$-3(x^2 + 13 - 30)$

	-30
-1	30
-2	15
-3	10
-5	6

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

Question 12

$-10x^2 + 110x - 300$

$-10(x^2 - 11x + 30)$

	30
-1	-30
-2	-15
-3	-10
-5	-6

$-10(x-5)(x-6)$