9-18-13

3rd Try

Busting B method of Factoring ax^2+bx+c

① $30n^2+19n+3$ ($a=30$, $c=3$)

$a \cdot c = 90$ (great 19)

1, 90
2, 45
3, 30
5, 18
6, 15
9, 10

$(30n^2+10n)+(9n+3)$

$10n(3n+1)+3(3n+1)$

$(3n+1)(10n+3)$

② $9n^2-9n+2$

$a \cdot c = 18$

-1, -18
-2, -9
-3, -6

$(9n^2-3n)+(-6n+2)$

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

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

③ $12x^2+11x+2$

$a \cdot c = 24$

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

$(12x^2+8x)+(3x+2)$

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

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

(4) $12n^2 + 44n + 7$

$ac = 84$

1, 84

2, 42

3, 28

4, 21

6, 14

7, 12

$(12n^2 + 2n) + (42n + 7)$

$2n(6n+1) + 7(6n+1)$

$(6n+1)(2n+7)$

a, b, c, and d are consecutive mutiples of 5, and $a < b < c < d$, what is the value of $(a-c)(d-b)$?

5 10 15 20

$\downarrow \quad \downarrow$

$-10 \cdot 10$

-100

9-18-13

4th Trig

Busting B method for factoring ax^2+bx+c.

① $12x^2+11x+2$ ($a=12$, $c=2$)

$a \cdot c = 24$

1, 24

2, 12

3, 8

4, 6

$(12x^2+3x)+(8x+2)$

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

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

② $30n^2+19n+3$ ($a=30$, $c=3$)

$a \cdot c = 90$

1, 90

2, 45

3, 30

5, 18

6, 15

9, 10

$(30n^2+10n)+(9n+3)$

$10n(3n+1)+3(3n+1)$

$(3n+1)(10n+3)$

Let's say we busted b like this

$30n^2+19n+3$

$(30n^2+9n)+(10n+3)$

$3n(10n+3)+1(10n+3)$

$(10n+3)(3n+1)$

$9n^2 - 9n + 2$ $\quad a \cdot c = 18$

$(9n^2 - 3n) + (-6n + 2)$

$-1, -18$
$-2, -9$
$-3, -6$

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

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

SAT

If a, b, c, and d are consecutive multiples of 5, and $a < b < c < d$, what is the value of $(a-c)(d-b)$?

20 25 30 35

$\downarrow$

$-10 \cdot 10$

-100