9-24-19 1st Trig Review

① $x+3 \overline{)\, x^2-6x-1}$

$x-9+\frac{26}{x+3}$

$-(x^2+3x)$

$-9x-1$

$-(-9x-27)$

26

② $\frac{x^3+8}{x^2+5x+6}$

SOFAS

$\frac{(x+2)(x^2-2x+4)}{(x+2)(x+3)}$

$x+2 \neq 0$

$-2 \quad -2$

$x \neq -2$

$\frac{x^2-2x+4}{x+3} \quad [x \neq -2]$

③ x^2-49

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

How many possibilities

④ $8x^2+\square x+35$

8	35
1, 8	1, 35
2, 4	5, 7

2

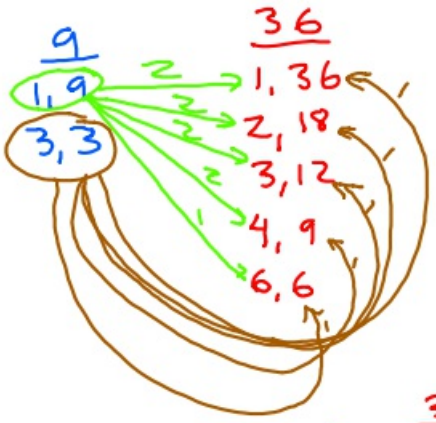
2

2

2

8

⑤ $9x^2 + \square x + 36$ (14)



⑥ $2x+3 \overline{)2x^2+15x+21}$ $\quad x + 6 + \frac{3}{2x+3}$

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

$12x+21$

$-(12x+18)$

3

⑦ $4x^2 - 7x - 15$

4: 1,4 ; 2,2

15: 1,15 ; 3,5

15.4 $(x \quad 1)(4x \quad 15)$

60.1 $(x \quad 15)(4x \quad 1)$

-12,5 $(x-3)(4x+5)$ ✓

$(x \quad 5)(4x \quad 3)$

$(2x \quad 1)(2x \quad 15)$

$(2x \quad 3)(2x \quad 5)$

⑧ $10x^2 - 31x - 14$

$(x \quad 1)(10x \quad 14)$

$(x \quad 14)(10x \quad 1)$

$(x \quad 2)(10x \quad 7)$

$(x \quad 7)(10x \quad 2)$

$(2x \quad 1)(5x \quad 14)$

$(2x \quad 14)(5x \quad 1)$

$(2x \quad 2)(5x \quad 7)$

-35+4 $(2x-7)(5x+2)$ ✓

10: 1,10 ; 2,5

14: 1,14 ; 2,7

(31)

9-24-19 3rd Trig

① $x-2 \overline{)x^2-8x-5}$

$x-6+\frac{-17}{x-2}$

$-(x^2-2x)$

$-6x-5$

$-(-6x+12)$

-17

② Factor x^2-16

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

③ How many possibilities

$8x^2+\square x+84$

24

8	84
1, 8	1, 84
2, 4	2, 42
	3, 28
	4, 21
	6, 14
	7, 12

④ $9x^2+\square x+4$

5

9	4
1, 9	1, 4
3, 3	2, 2

⑤ Simplify $\dfrac{n^3+8}{n^2+7n+10}$

SOFAS

$\dfrac{(n+2)(n^2-2n+4)}{(n+2)(n+5)}$

$n+2 \neq 0$
$-2 \quad -2$
$n \neq -2$

$\dfrac{n^2-2n+4}{n+5}$ $[n \neq -2]$

⑥ Factor $x^2-7x-30$

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

$+3x$
$-10x$

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

⑦ Factor $4x^2-7x-15$

15, 4 $(x \quad 1)(4x \quad 15)$
60, 1 $(x \quad 15)(4x \quad 1)$
$-12+5$ $(x-3)(4x+5)$ ✓
$(x \quad 5)(4x \quad 3)$
$(2x \quad 1)(2x \quad 15)$
$(2x \quad 3)(2x \quad 5)$

4
1, 4
2, 2

15
1, 15
3, 5

⑧ Factor $10x^3-20y^3$

$10(x^3-2y^3)$

(9) Factor $10x^2 - 31x - 14$

$(x \quad 1)(10x \quad 14)$ $\frac{10}{1,10}$ $\frac{14}{1,14}$

$(x \quad 14)(10x \quad 1)$ $\frac{}{2,5}$ $\frac{}{2,7}$

$(x \quad 2)(10x \quad 7)$

$(x \quad 7)(10x \quad 2)$

$(2x \quad 1)(5x \quad 14)$

$(2x \quad 14)(5x \quad 1)$

14, 40 $(2x \quad 2)(5x \quad 7)$

-35, +4 $(2x - 7)(5x + 2)$ ✓

9-24-19 4th Try

① Factor $x^2 - 36$

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

② $x-4 \overline{)\, x^2 - 5x - 2}$

$x - 1 + \frac{-6}{x-4}$

$-(x^2 - 4x)$

$-x - 2$

$-(-x + 4)$

-6

③ $x+5 \overline{)\, x^2 - 8x - 2}$

$x - 13 + \frac{63}{x+5}$

$-(x^2 + 5x)$

$-13x - 2$

$-(-13x - 65)$

63

④ Simplify $\dfrac{x^3 + 8}{x^2 + 3x + 2}$

SOFAS

$\dfrac{(x+2)(x^2 - 2x + 4)}{(x+1)(x+2)}$

$x + 2 \neq 0$

$-2 \quad -2$

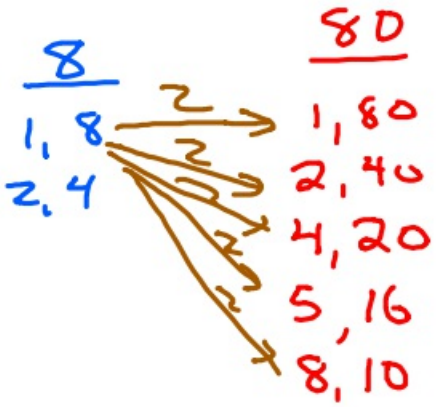
$x \neq -2$

$\dfrac{x^2 - 2x + 4}{x+1} \{x \neq -2\}$

(5) How many possibilities

$8x^2 + \square x + 80$

(20)



(6) $9x^2 + \square x + 25$

(5)

(7) Factor $4x^2 - 7x - 15$

15, 4 $(x \quad 1)(4x \quad 15)$

60, 1 $(x \quad 15)(4x \quad 1)$

$-12 + 5$ $(x - 3)(4x + 5)$ ✓

$(x \quad 5)(4x \quad 3)$

$(2x \quad 1)(2x \quad 15)$

$(2x \quad 3)(2x \quad 5)$

4
1, 4
2, 2

15
1, 15
3, 5

(8) Factor $x^2 - 121$

$(x - 11)(x + 11)$