8-20-19 1st Trig

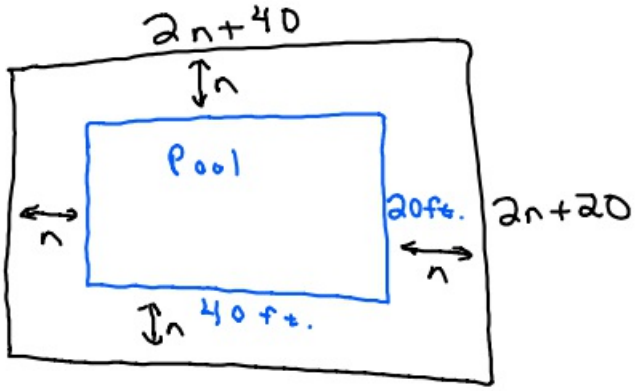
(20) $(3x+2)(5x-4) - (3x+2)(5x+4)$

$15x^2 - 12x + 10x - 8$ $\quad 15x^2 + 12x + 10x + 8$

$15x^2 - 2x - 8 - (15x^2 + 22x + 8)$

$15x^2 - 2x - 8 - 15x^2 - 22x - 8$

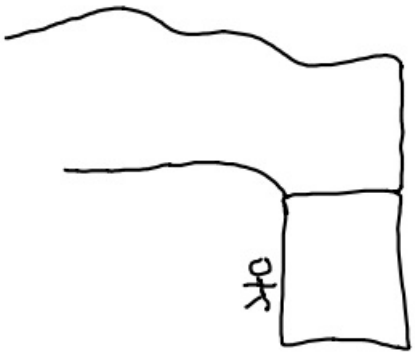
$-24x - 16$



$(2n+40)(2n+20) - 800$

$4n^2 + 40n + 80n + 800 - 800$

$4n^2 + 120n$



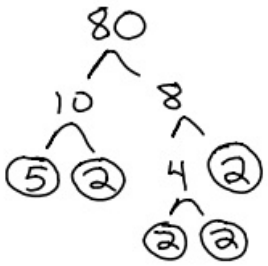
Prime numbers

2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31...

Prime factorization

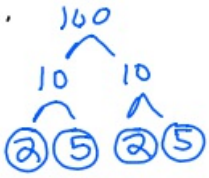
$60 = 2 \cdot 2 \cdot 3 \cdot 5$

Factor Tree



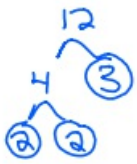
$2 \cdot 2 \cdot 2 \cdot 2 \cdot 5 = 80$

① Do factor tree for 100.



$100 = 2 \cdot 2 \cdot 5 \cdot 5$

② Simplify $\sqrt{12}$



$2\sqrt{2 \cdot 2 \cdot 3}$

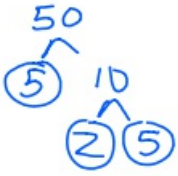
$2\sqrt{3}$

③ $\sqrt{2 \cdot 2 \cdot 2 \cdot 3 \cdot 3 \cdot 5}$

$2 \cdot 3\sqrt{2 \cdot 5}$

$6\sqrt{10}$

④ Simplify $\sqrt{50}$



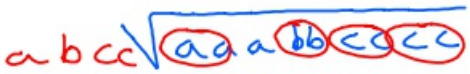
$\sqrt{2 \cdot 5 \cdot 5}$

$5\sqrt{2}$

⑤ $\sqrt{a^5}$

$a^2\sqrt{a}$

⑥ $\sqrt{a^3b^2c^4}$



$abc^2\sqrt{a}$

⑦ $\sqrt{-1} = i$

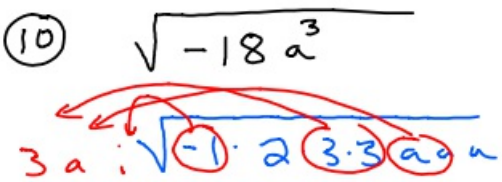
⑧ $\sqrt{-8}$

$2i\sqrt{2}$

⑨ $\sqrt[3]{a^4b^5}$

$ab\sqrt[3]{ab^2}$

⑩ $\sqrt{-18a^3}$



$3ai\sqrt{2a}$

$(3ai\sqrt{2a})$

8-20-19 3rd Trig

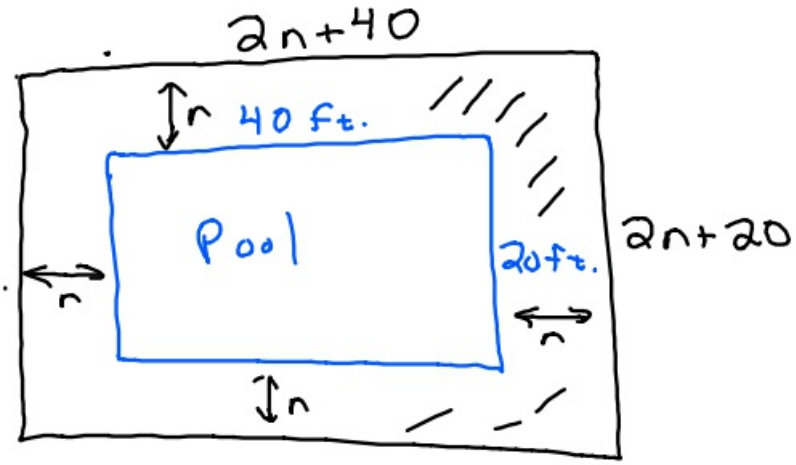
(20) $(3x+2)(5x-4) - (3x+2)(5x+4)$

$15x^2 - 12x + 10x - 8$ $\qquad$ $15x^2 + 12x + 10x + 8$

$15x^2 - 2x - 8 - (15x^2 + 22x + 8)$

$15x^2 - 2x - 8 = 15x^2 - 22x - 8$

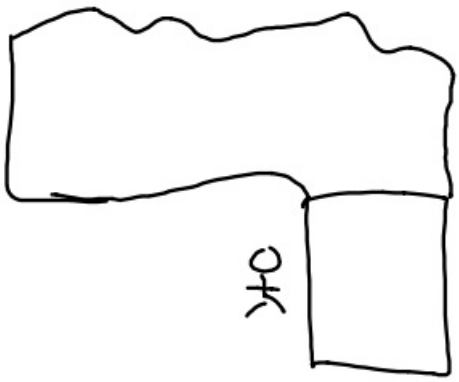
$-24x - 16$



$(2n+40)(2n+20) - 800$

$4n^2 + 40n + 80n + 800 - 800$

$4n^2 + 120n$



Prime numbers

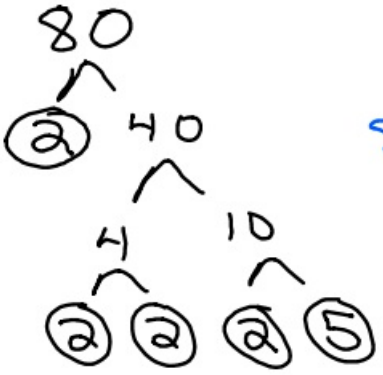
Only divisible by 1 and itself

2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, ...

Prime factorization

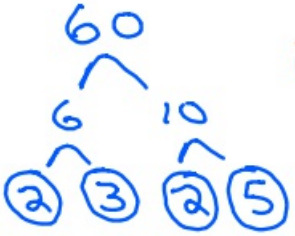
$30 = 2 \cdot 3 \cdot 5$

Factor Tree



$80 = 2 \cdot 2 \cdot 2 \cdot 2 \cdot 5$

① Simplify $\sqrt{60}$



$2\sqrt{2 \cdot 2 \cdot 3 \cdot 5}$

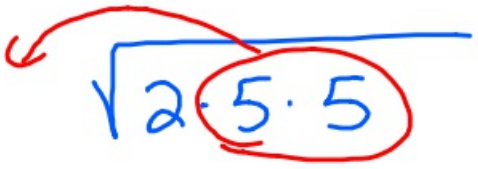
$2\sqrt{15}$

② $\sqrt{12,600} = \sqrt{2 \cdot 2 \cdot 2 \cdot 3 \cdot 3 \cdot 5 \cdot 5 \cdot 7}$

$2 \cdot 3 \cdot 5\sqrt{2 \cdot 7}$

$30\sqrt{14}$

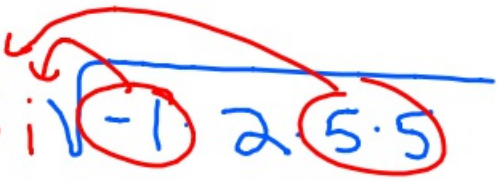
③ Simplify $\sqrt{50}$



$5\sqrt{2}$

④ $\sqrt{-1} = i$

⑤ $\sqrt{-50}$



$5i\sqrt{2}$

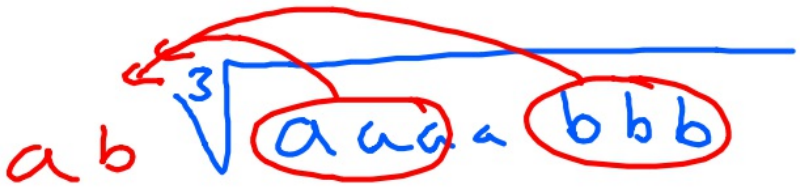
⑥ $\sqrt{a^5}$

$a^2\sqrt{a}$

⑦ $\sqrt{a^3b^2c^4}$

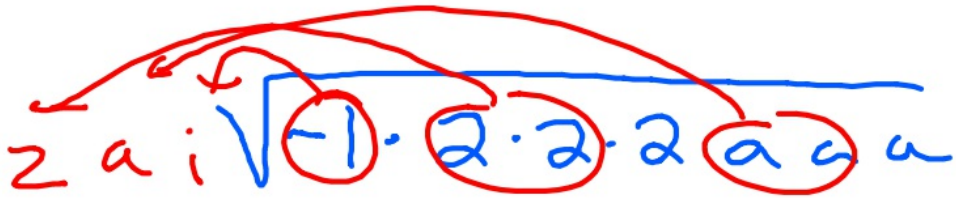
$abc^2\sqrt{a}$

(8) $\sqrt[3]{a^4 b^3}$



$ab\sqrt[3]{a}$

(9) $\sqrt{-8a^3}$



$2ai\sqrt{2a}$

8-20-19 4th Try

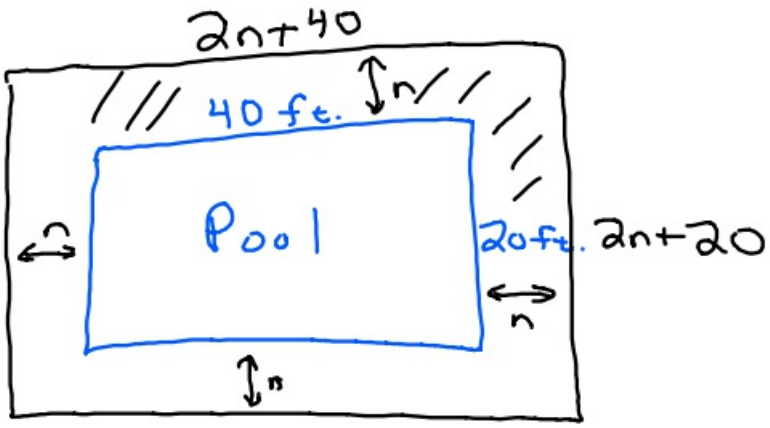
(20) $(3x+2)(5x-4) - (3x+2)(5x+4)$

$15x^2 - 12x + 10x - 8$ $\quad 15x^2 + 12x + 10x + 8$

$15x^2 - 2x - 8 - (15x^2 + 22x + 8)$

$15x^2 - 2x - 8 - 15x^2 - 22x - 8$

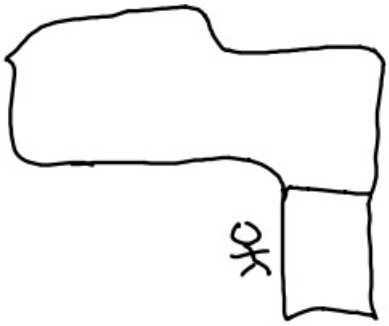
$-24x - 16$



$(2n+40)(2n+20) - 800$

$4n^2 + 40n + 80n + 800 - 800$

$4n^2 + 120n$



Prime numbers

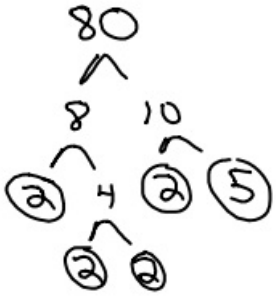
Divisible by 1 and itself only.

2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, ...

Prime factorization

$60 = 2 \cdot 2 \cdot 3 \cdot 5$

Factor Tree



$80 = 2 \cdot 2 \cdot 2 \cdot 2 \cdot 5$

① Simplify $\sqrt{12}$

$\sqrt{2 \cdot 2 \cdot 3}$

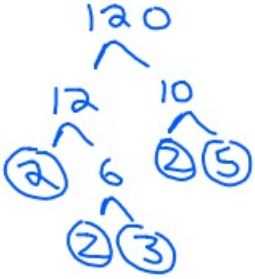
$2\sqrt{3}$

② $\sqrt{19,800} = \sqrt{2 \cdot 2 \cdot 2 \cdot 3 \cdot 3 \cdot 5 \cdot 5 \cdot 11}$

$2 \cdot 3 \cdot 5\sqrt{2 \cdot 11}$

$30\sqrt{22}$

③ Simplify $\sqrt{120}$



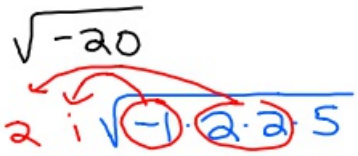
$\sqrt{2 \cdot 2 \cdot 2 \cdot 3 \cdot 5}$

$2\sqrt{2 \cdot 3 \cdot 5}$

$2\sqrt{30}$

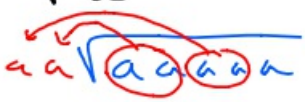
④ $\sqrt{-1} = i$

⑤ $\sqrt{-20}$



$2i\sqrt{5}$

⑥ $\sqrt{a^5}$



$a^2\sqrt{a}$

⑦ $\sqrt{a^3b^2c^4}$

$abc^2\sqrt{a}$

⑧ $\sqrt{-8a^3}$

$2ai\sqrt{2a}$ $(2a\sqrt{2a})$:

⑨ $\sqrt[3]{a^4b^6}$

$ab^2\sqrt[3]{a}$