Questions on Factoring Review
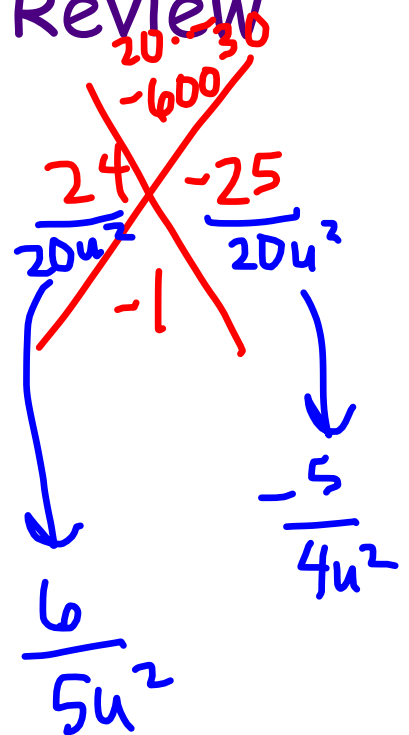
#2 WKS?

$$\textcircled{2} \; -20u^4 + u^2 + 30$$

$$-(20u^4 - u^2 - 30)$$

$$-(4u^2 - 5)(5u^2 + 6)$$

$20 \cdot -30$
-600

$24 \quad -25$

$\dfrac{24}{20u^2} \quad \dfrac{-25}{20u^2}$

-1

$\dfrac{6}{5u^2}$

$\dfrac{-5}{4u^2}$

11) $60x^4 - 185x^2 + 105$

$5(12x^4 - 37x^2 + 21)$

$5(3x^2 - 7)(4x^2 - 3)$

$12 \cdot 21$
252

$-9 \qquad -28$

$\frac{}{12x^2} \qquad \frac{}{12x^2}$

-37

$\div 3 \qquad \div 4$

$\frac{-3}{4x^2} \qquad \frac{-7}{3x^2}$

4.1 The Gift
A Develop Understanding Task

Part I: Chile is celebrating her Quinceañera

Chile is celebrating her Quinceañera. Hannah knows the perfect gift to buy Chile, but it costs $360. Hannah can't afford to pay for this on her own so thinks about asking some friends to join in and share the cost.

1. How much would each person spend if there were two people dividing the cost of the gift? How much would each person spend if there were three people dividing the cost? Five people? Ten? One hundred?

2 people — $180 each   100 people — $3.60 each

3 " — $120 each

5 " — $72 "

10 " — $36 "

Jan 26-1:04 PM

2. Determine the function that could be used to model the amount each person would spend depending on the number of people contributing to the gift.

$$\frac{360}{P} = C$$

$$C = \text{cost per person}$$

$$P = \#\text{ of people}$$

$$y = \frac{360}{x}$$

3. Use multiple representations to show how the amount each person would contribute to the gift would change depending on the number of people contributing. Describe the connections between the representations.
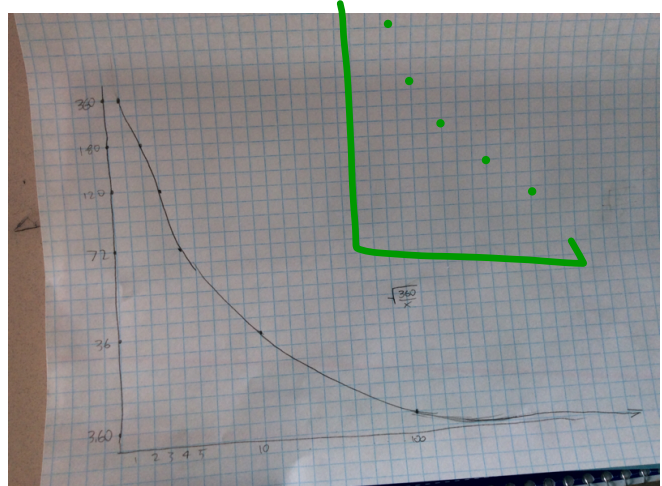
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l change depending on the number of people co
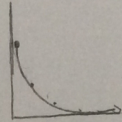ns between the representations.

$$C = \frac{360}{P}$$

$$p = \frac{360}{c}$$

$$360 = C \cdot p$$

he features of the function based on the context
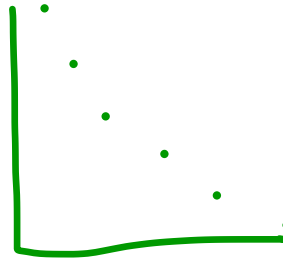/decreasing, maxima/minima, discrete/continu
s).

gift would change depending on the numbe
connections between the representations.

4. Describe the features of the function based
increasing/decreasing, maxima/minima, d
asymptotes).

range {360, 40?}

domain{

3 cont'd

P	C
1	360
2	180
3	120
4	90
5	72
6	60
⋮	⋮

4. Describe the features of the function based on the context (domain/range, increasing/decreasing, maxima/minima, discrete/continuous, end behavior, intercepts, asymptotes).

$$\text{domain} : \{1, 2, 3 \ldots 36{,}000\} \quad 0.01 = \frac{360}{P}$$

$$\{x \mid x \in \mathbb{N} < 36{,}000\}$$

$$\text{range} : [0.01, 360]$$

decreasing everywhere

end beh:

As $x \to \infty$,

$f(x) \to 0$

no max & min

As $x \to 0$,

discrete

no intercepts $f(x) \to 360$

Asymptotes :

Homework/Classwork

4.1 Ready, Set, Go

Oct 21-8:47 AM