

TASK 1: Justify your answer.

Does $\frac{n}{(n+2)}$ simplify to $\frac{1}{2}$? Why or why not?

No, ... all or nothing!

OBJECTIVE 1: Using Rational Functions in Real-Life Applications

Still follow the same steps as before. But now your answer will have a measure of units in the end which might change how your round too.

STEPS:

1. GCF first, if possible.
2. Factor the numerator and denominator using the X.
3. Cross out any factors that match exactly on both top and bottom, one for one. Remember it is all or nothing. If there is a + or - sign then the entire (factor) must go not just part of it.

TASK 2: Cost for Pressing CD's

For ICL Production Company, the rational function $C(x) = \frac{2.6x+10,000}{x}$ describes the company's cost per disc of pressing

x CD. Find the cost per disc for pressing:

a) 100 CD's

b) 1000 CD's

$$C(100) = \frac{2.6(100) + 10,000}{100} = 102.6 \quad C(1000) = \frac{2.6(1000) + 10,000}{1000} = 12.6$$

a) \$ 102.60

b) \$ 12.60

- c) Think about the domain restriction for this problem? What is a reasonable domain? What value for x would cause problems or undefined results?

Nonnegative values, zero doesn't sound great, can't make ∞ CD's.

So, ... D: (0, 1500]

TASK 3: Silk Screen for T-shirts

WCC Silk Screening cost per tee shirt for silk screening x tee shirts is given by the rational function $C(x) = \frac{3.2x+400}{x}$. Find the cost per tee shirt for printing:

a) 100 t-shirts

$$C(100) = \frac{3.2(100) + 400}{100} = 7.2$$

\$7.20

b) 1000 tee shirts

$$C(1000) = \frac{3.2(1000) + 400}{1000} = 3.6$$

\$3.60

c) Think about the domain restriction for this problem? What is a reasonable domain? What value for x would cause problems or undefined results?

never negative shirts

never 0 on a functioning work day

never ∞ shirts

D: (0, 1500]

Common Mistakes:

Still need help with: