Worksheet #1

MATH 120 — Calculus & Applications
Thursday, Aug 22

Please print your name:

Problem 1. (warmup)

(a) Express each in the form x^r:

$$\sqrt{x} = \boxed{}, \quad \frac{1}{x^2} = \boxed{}, \quad x^3 \cdot x^7 = \boxed{}, \quad (x^3)^7 = \boxed{}, \quad \frac{x^3}{x^7} = \boxed{}$$

(b) The equation $ax^2 + bx + c = 0$ has up to $\boxed{}$ solutions given by $\boxed{}$.

(c) If $f(x) = 2x - \frac{1}{x}$, then $f(3) = \boxed{}$ and $f\left(\frac{1}{x-1}\right) = \boxed{}$.

Problem 2. Factor:

(a) $x^2 - 9 = \boxed{}$

(b) $3x^2 - 12x - 36 = \boxed{}$

(c) $5x^2 + 2x - 1 = \boxed{}$

Problem 3. Find the intercepts.

(a) $2x + 3y = 12$ The x-intercepts are $\boxed{}$, and the y-intercepts are $\boxed{}$.

(b) $y = 7$ The x-intercepts are $\boxed{}$, and the y-intercepts are $\boxed{}$.

(c) $y = 2x^2 - 3x + 1$ The x-intercepts are $\boxed{}$, and the y-intercepts are $\boxed{}$.

(scratch space)

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