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a) $x^2 = 4x \quad (\div x)$

$x = 4$

b) $\frac{1}{\sqrt{5}-2} = a + b\sqrt{5}$

c) $(x+h)^2 + (y-k)^2 = r^2$

$(x-1)^2 + (y-2)^2 = (5)^2$

$x^2 - 2x + 1 + y^2 - 4y + 4 = 25$

$x^2 - 2x + y^2 - 4y = 20$

d) $|2x + 3| = 9$

$2x = 6$

$x = 3$

e) $y = x^2 \tan x$

$y' = vu' + uv'$

$= \tan x . x + x^2 . \sec^2 x$

$= \tan x^2 + (\sec^2 x) x^2$

f) $S_\infty = \frac{a}{1-r}$

$= \frac{1}{1-\frac{1}{3}}$

$= 1\frac{1}{2}$

g) domain: $x \neq 8$

Additional writing space on back page.