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$$a) \quad x^2 = 4x.$$

$$x = 4.$$

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

$$\frac{1}{\sqrt{5}-2} \times \frac{\sqrt{5}+2}{\sqrt{5}+2}$$

$$\frac{\sqrt{5}+2}{3}$$

3

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

na

$$c) \quad (-1, 2) \quad r = 5.$$

$$(x^2 + (-1)) + (y^2 + 2) = 25.$$

$$(x^2 - 1) + (y^2 + 2) = 25.$$

d).

$$|2x + 3| = 9.$$

$$2x + 3 = 9.$$

$$2x = 6.$$

$$x = 3.$$

$$2x + 3 = -9$$

$$2x = -12$$

$$x = -6.$$

OR.

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

$$y' = x \times \sec^2 x + \tan x \times 2x.$$

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

$$f) 1 - \frac{1}{3} + \frac{1}{9} - \frac{1}{27} + \dots$$

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

$$a = 1$$

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

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

$$= -\frac{3}{4}.$$

$$= -0.75.$$

$$g) f(x) = \sqrt{x-8}$$

domain.  $x$  is ~~not~~ real for  $x > 8$ .

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