

$$1. A = \frac{1}{2}bh$$

$$A = \frac{1}{2}(5)(3)$$

$$A = \frac{15}{2}$$

2. r = DISTANCE BETWEEN CENTER AND POINT ON CIRCLE. I COULD USE DISTANCE FORMULA TO FIND RADIUS, BUT I NOTICE I CAN MAKE A SPECIAL RIGHT TRIANGLE SO I'LL USE THAT



$$1^2 + 1^2 = r^2$$

$$2 = r^2$$

$$\pm\sqrt{2} = r$$

$$r = \sqrt{2}$$

$$A = \pi(\sqrt{2})^2$$

$$A = 2\pi$$

$$3. a. A_1 = (1)(f(1)) = 1(5) = 5$$

$$A_2 = (1)(f(2)) = 1\left(\frac{5}{2}\right) = \frac{5}{2}$$

$$A_3 = (1)(f(3)) = 1\left(\frac{5}{3}\right) = \frac{5}{3}$$

$$A_4 = (1)(f(4)) = 1\left(\frac{5}{4}\right) = \frac{5}{4}$$

$$5 + \frac{5}{2} + \frac{5}{3} + \frac{5}{4} = \frac{60}{12} + \frac{30}{12} + \frac{20}{12} + \frac{15}{12} = \frac{125}{12}$$

b. USE MORE RECTANGLES

$$A_1 = \frac{1}{2}(5) = \frac{5}{2}$$

$$A_4 = \frac{1}{2}(2) = 1$$

$$A_7 = \frac{1}{2}\left(\frac{5}{4}\right) = \frac{5}{8}$$

$$A_2 = \frac{1}{2}\left(\frac{10}{3}\right) = \frac{5}{3}$$

$$A_5 = \frac{1}{2}\left(\frac{5}{3}\right) = \frac{5}{6}$$

$$A_8 = \frac{1}{2}\left(\frac{10}{9}\right) = \frac{5}{9}$$

$$A_3 = \frac{1}{2}\left(\frac{5}{2}\right) = \frac{5}{4}$$

$$A_6 = \frac{1}{2}\left(\frac{10}{7}\right) = \frac{5}{7}$$

$$\frac{5}{2} + \frac{5}{3} + \frac{5}{4} + 1 + \frac{5}{6} + \frac{5}{7} + \frac{5}{8} + \frac{5}{9} \approx 9.145$$

$$4. \sqrt{(1-5)^2 + (5-1)^2}$$

$$\sqrt{16+16}$$

a. $\sqrt{32}$

$$(1,5) (2, \frac{5}{2}) (3, \frac{5}{3}) (4, \frac{5}{4}) (5,1)$$

$$\sqrt{(1-2)^2 + (5-\frac{5}{2})^2} + \sqrt{(2-3)^2 + (\frac{5}{2}-\frac{5}{3})^2} + \sqrt{(3-4)^2 + (\frac{5}{3}-\frac{5}{4})^2}$$

$$+ \sqrt{(4-5)^2 + (\frac{5}{4}-1)^2}$$

$$\sqrt{1 + \frac{25}{4}} + \sqrt{1 + \frac{25}{36}} + \sqrt{1 + \frac{25}{144}} + \sqrt{1 + \frac{1}{16}}$$

$$\sqrt{\frac{29}{4}} + \sqrt{\frac{61}{36}} + \sqrt{\frac{169}{144}} + \sqrt{\frac{17}{16}} \approx \sqrt{\text{scribbled out}}$$

b. 6.11

C. INCREASE NUMBER OF LINE SEGMENTS