5.1 1.3 #s 14, 15

11 12 13 14 15 16 17 18 19 20

x. Score: 0 of 1 pt HW Score: 13.

Find the intercepts and then use them to graph the equation.

$2x - 8 = y$

Use the graphing tool to graph the line. Use the intercepts when drawing the line. If only one intercept exists, use it and another point to draw the line.

$y = 2x - 8$

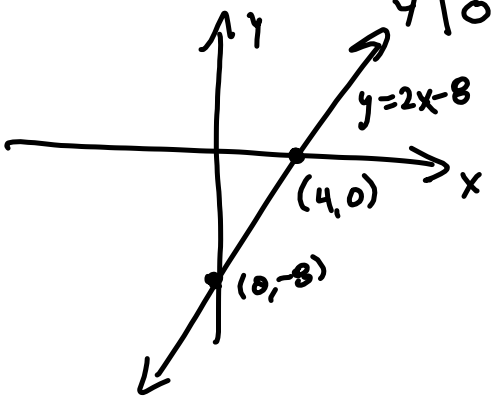
x	y
0	-8
4	0

Intercept

$2x - 8 = 0$

$2x = 8$

$x = \frac{8}{2} = 4$



11 12 13 14 15 16 17 18 19 20

Ex. Score: 0 of 1 pt HW Score: 1

Determine the center and radius of the following circle and sketch the graph.

$x^2+y^2=6x+8y$

Use the graphing tool on the right to graph the equation.

$x^2-6x+3^2+y^2-8y+4^2=0+9+16$

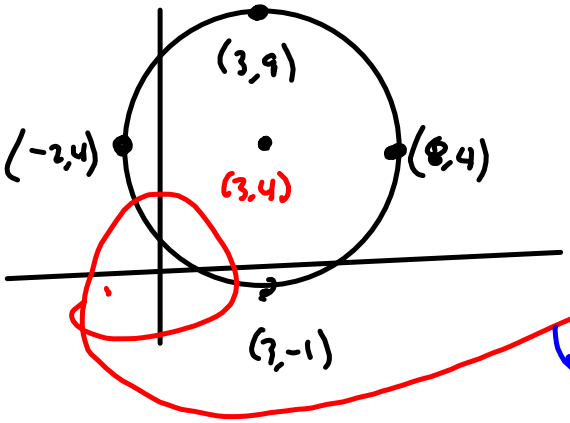
$\frac{6}{2}=3 \rightsquigarrow 3^2$ $\frac{8}{2}=4 \rightsquigarrow 4^2$

$x^2-6x+3^2+y^2-8y+4^2=25$

$(x-3)^2+(y-4)^2=25$

$(h,k)=(3,4)$

$r=\sqrt{25}=5$



$(x+1)^2=(x+1)(x+1)$ (-2,4)

$=x^2+x+x+1$

$=x^2+2x+1$

1
1 1
1 2 1
1 3 3 1

$(x+1)^3=x^3+3x^2+3x+1$

Good enough, but some ambiguity, right here

But this is enough detail, for now.

Takes me 5 hours to finish a job, solo.
How much of the job is done in 2 hours?

$\frac{2}{5}$ of job.

$\left(\frac{1 \text{ job}}{5 \text{ hrs}}\right)(2 \text{ hrs}) = \frac{2}{5}$ of a job done.

Let x = the # of hours I work at it

Then $\frac{1}{5}x$ is how much of the job I got done.

David's young & strong. He can do the job in 3 hours. How long will it take us working together?

1 Job = 1 Job !

Let x = same. Then

$\frac{1}{5}x + \frac{1}{3}x = 1$ is the setup

Book says $\frac{1}{5} + \frac{1}{3} = \frac{1}{x}$

David starts an hour late.
How long do David & Steve each work

$\frac{1}{5}x + \frac{1}{3}(x-1) = 1$

$\frac{1}{5}x$: my time

$\frac{1}{3}(x-1)$: David's time

$x^2 + y^2 = 4x + 3y$

$x^2 - 4x + y^2 - 3y = 0$

$\frac{4}{2} = 2 \rightarrow 2^2 = 4$ $\quad \frac{3}{2} \rightarrow \left(\frac{3}{2}\right)^2 = \frac{9}{4}$

$4 + \frac{9}{4} = \frac{16+9}{4} = \frac{25}{4}$

$x^2 - 4x + 2^2 + y^2 - 3y + \left(\frac{3}{2}\right)^2 = \frac{25}{4}$

$(x-2)^2 + (y - \frac{3}{2})^2 = \frac{25}{4}$

$(h,k) = (2, \frac{3}{2})$, $r = \sqrt{\frac{25}{4}} = \frac{5}{2}$