

Videos: Best Buy Sucks & they
closed my old Radio Shack in that
Safeway mall on 10th St & 35th

Home work: Get Rollin'!
work together / separately.
Come up here w/ questions.
we'll nail "formatting" as we go.

Hand in homework 1st 10 minutes.
No big if it waits 'til next class
period.

Focus on $\S 1.1, 1.2, 1.3, \dots$

CP is "prerequisite."

Some good review, but don't let it slow you down on CP.

I plan on making videos for CP but headset, etc, is slowing me down.

Very easy to get bogged-down on that optional stuff.

Syllabus & Schedule got revised over the weekend. Check 'em out.

As we sit here, I'm putting a link to homework from the past to give you an idea how I write the stuff.

~~See "Old homework" link on the main NavBar.~~

Oh! It's the "examples" directory living with the homework assignments.

<http://www.harryzaims.com/121-all/homework-assignments/>,

i.e., here:

<http://www.harryzaims.com/121-all/homework-assignments/examples/>

§1.1 #23, from book (not MyLab)

LCD: (2)(3) = 6

$$\frac{x}{2} - 5 = -12 - \frac{2x}{3}$$

$$\frac{x}{2} \cdot \frac{3}{3} - \frac{5}{1} \cdot \frac{6}{6} = -\frac{12}{1} \cdot \frac{6}{6} - \frac{2x}{3} \cdot \frac{2}{2} \quad \frac{2}{5} + \frac{1}{5} = \frac{2+1}{5} = \frac{3}{5}$$

$$\frac{3x}{6} - \frac{30}{6} = -\frac{72}{6} - \frac{4x}{6} \quad \frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$

$$\frac{3x-30}{\text{LCD}} = \frac{-72-4x}{\text{LCD}}$$

In the sequel, THIS might be the LCD! $(x+3)(x+5)(x-7)$

$$\begin{array}{r} 3x-30 = -72-4x \\ +4x+30 = +30+4x \\ \hline \end{array}$$

$$7x = -42$$

$$x = \frac{-42}{7} = -6 = x$$

$$\frac{1}{18} + \frac{7}{30}$$

$$\begin{array}{r} 2 \overline{) 18} \\ 9 \\ \hline 3 \end{array}$$

2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31

$$90 = \text{LCD} = 2 \cdot 3 \cdot 3 \cdot 5$$

$$\begin{array}{r} 2 \overline{) 30} \\ 15 \\ \hline 3 \end{array}$$

$$\left(\frac{1}{2 \cdot 3 \cdot 3}\right) \left(\frac{5}{5}\right) + \left(\frac{7}{2 \cdot 3 \cdot 5}\right) \left(\frac{6}{3}\right) \quad 1 \ 2 \ 3 \ 5 \ 7 \ 9$$

$$= \frac{5+21}{\text{LCD}} = \frac{26}{\text{LCD}} = \frac{\overset{13}{\cancel{26}}}{\underset{45}{\cancel{90}}} = \frac{13}{45}$$

$$\frac{3x+2}{(x+2)(x-1)} + \frac{7x-5}{(x+3)(x-1)}$$

is coming, but the same technique applies!

$$\text{LCD} = (x+2)(x-1)(x+3)$$

So...

$$\left(\frac{3x+2}{(x+2)(x-1)}\right) \left(\frac{x+3}{x+3}\right) + \left(\frac{7x-5}{(x+3)(x-1)}\right) \left(\frac{x+2}{x+2}\right)$$

$$= \frac{(3x+2)(x+3) + (7x-5)(x+2)}{\text{LCD}}, \text{ etc., is the idea.}$$

Averaged 80 mph on 1st half of trip.

Company wants 60 mph, avg.

what speed for 2nd half to make
it come out 60 mph?

$$\text{Dist} = \text{Rate} \cdot \text{Time}$$

$$\text{Avg Rate} = \frac{r_1 + r_2}{2}$$

Since $r_1 = 80$, we just need one
variable, r :

$$\text{Avg Rate} = \frac{80 + r}{2}$$

Put words to "r"

r = the avg rate for 2nd half
of his trip ($\frac{\text{mi}}{\text{hr}}$) (i.e., mph)

Want Avg Rate = 60

$$\frac{r + 80}{2} = 60 \quad ! \quad \text{Solve for } r.$$

1
2
3
4
5
6
7
8
9
10

Ex. Score: 0 of 1 pt HW Score: 0% (0 of 23 pts)

Find the distance between the pair of points. Also, find the midpoint of the line segment joining them.

$$\left(\frac{\pi}{6}, 4\right), \left(\frac{\pi}{4}, 0\right)$$

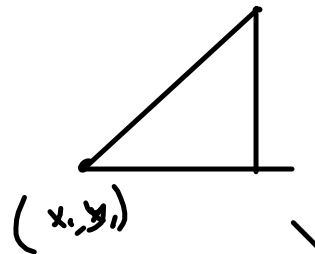
(x_2, y_2)

Find the distance.

$$d = \square$$

(Simplify your answer. Type an exact answer, using π as needed.)

$$\begin{aligned}
 d &= \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \\
 &= \sqrt{\left(\frac{\pi}{4} - \frac{\pi}{6}\right)^2 + (0 - 4)^2} \\
 &= \sqrt{\left(\frac{\pi}{12}\right)^2 + (-4)^2} \\
 &= \frac{\pi^2}{12^2} + \frac{16}{1} \cdot \frac{12^2}{12^2} \\
 &= \sqrt{\frac{\pi^2}{144} + 16}
 \end{aligned}$$



$$\begin{aligned}
 &\frac{\pi}{4} \cdot \frac{3}{3} - \frac{\pi}{6} \cdot \frac{2}{2} \\
 &= \frac{3\pi - 2\pi}{12} = \frac{\pi}{12}
 \end{aligned}$$

Invested ~~Part~~ She won! #39 S'1.2, Book.
 $\frac{1}{3}$ her winnings @ 14% coffee shop.
 $\frac{1}{6}$ her .. @ 12%
 $\frac{1}{2}$ to gummint

She earned \$4,000

How much did she win?

Let x = how much she won (\$)

Then $\frac{1}{2}x$ to U.S.A.

$\frac{1}{3}x$ to coffee shop @ 14%

$\frac{1}{6}x$.. bakery @ 12%.

Her earnings were \$4,000

$\frac{1}{3}x$ \$

$.14 \left(\frac{1}{3}x \right)$ = earnings from coffee shop.

Total Earnings:

$$\left((.14) \left(\frac{1}{3}x \right) + (.12) \left(\frac{1}{6}x \right) = 4000 \right) (100)$$

$$\frac{14}{3}x + \frac{12}{6}x = 400000$$

$$\frac{14x}{3} + \left(\frac{2x}{1} \right) \left(\frac{2}{3} \right) = \left(\frac{400000}{1} \right) \left(\frac{3}{3} \right)$$

49. *Average Speed* Junior drove his rig on Interstate 10 from San Antonio to El Paso. At the halfway point he noticed that he had been averaging 80 mph, while his company requires his average speed to be 60 mph. What must be his speed for the last half of the trip so that he will average 60 mph for the entire trip?

HINT The distance from San Antonio to El Paso is irrelevant. Use D or simply make up a distance.

$$D = D$$

and we want

$$\begin{aligned} \text{Total Dist} &= r_1 t_1 + r_2 t_2 \\ r_1 &= 80 && \downarrow \text{Drop subscript} \\ &= 80 t_1 + r t_2 && \text{Just one rate.} \end{aligned}$$

$$r_1 t_1 = r_2 t_2, \text{ also. Same distances.}$$

$$80 t_1 = r t_2$$

	1 st $\frac{1}{2}$	2 nd $\frac{1}{2}$
D	$D = 80 t_1$	$D = r t_2$
t	t_1	$t_2 = \text{Total time} - t_1$
r	80	r

$$\text{Want Avg speed} = 60$$

$$r = \frac{D}{t_2} \quad 80 = \frac{D}{t_1}$$

$$\text{AVG SPEED} = \frac{2D}{60}$$

$$\begin{aligned} \text{TOTAL TIME} = t_1 + t_2 &= \frac{D}{r_1} + \frac{D}{r_2} \\ &= \frac{D}{80} + \frac{D}{r} \\ &= \frac{Dr + 80D}{80r} \end{aligned}$$

$$\text{TOTAL TIME} = \frac{2D}{60}, \text{ also!}$$

$$\text{TOTAL TIME} = \text{TOTAL TIME}$$

$$\frac{Dr + 80D}{80r} = \frac{2D}{60}$$

$LCD = 240$

$$\frac{\cancel{D}(r+80)}{80r} = \frac{\cancel{2D}}{60}$$

$$\frac{2}{60} = \frac{1}{30}$$

$$\frac{r+80}{80r} = \frac{1}{30}$$

$$\left(\frac{r+80}{\cancel{2 \cdot 2 \cdot 2 \cdot 2 \cdot 5} r} \right) \left(\frac{3}{3} \right) = \left(\frac{1}{2 \cdot 3 \cdot 5} \right) \left(\frac{\cancel{2 \cdot 2 \cdot 2 \cdot 2 \cdot r}}{\cancel{2 \cdot 2 \cdot 2 \cdot 2 \cdot r}} \right)$$

$$\frac{3(r+80)}{LCD} = \frac{8r}{LCD}$$

$$3r + 240 = 8r$$

$$-5r = -240$$

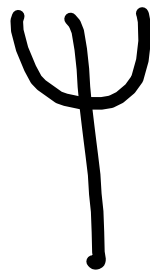
$$r = \frac{-240}{-5} = 48 \text{ mph}$$

$$\begin{array}{r} 2 \overline{)80} \\ 2 \overline{)40} \\ 2 \overline{)20} \\ 2 \overline{)10} \\ \hline 5 \end{array}$$

$$\begin{array}{r} 2 \overline{)30} \\ 3 \overline{)15} \\ \hline 5 \end{array}$$

$LCD = 2 \cdot 2 \cdot 2 \cdot 2 \cdot 3 \cdot 5 \cdot r$
 I missed the "r" in LCD

* sigh *



Greek letter
psi.

$$\left(\frac{r+30}{8r} = \frac{1}{30} \right) (10)$$

$$\frac{r+30}{8r} = \frac{1}{3}$$

$$3(r+30) = 8r$$

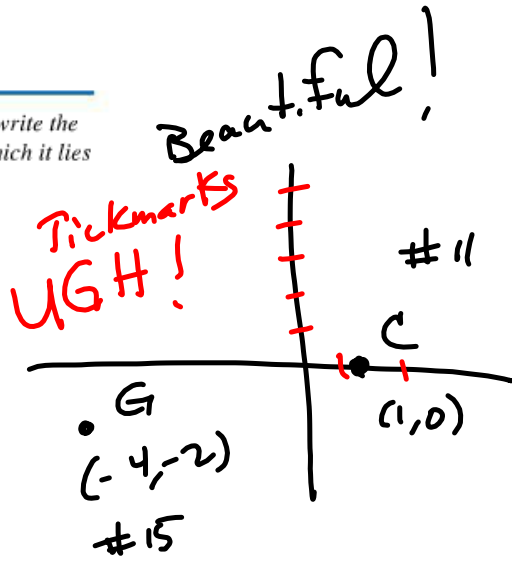
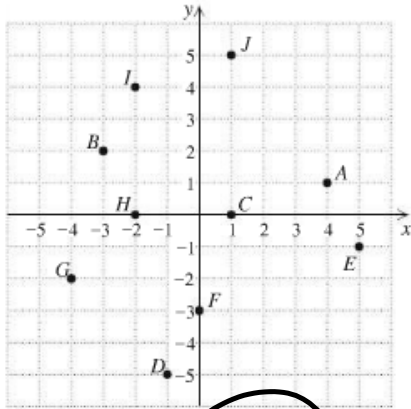
$$3r + 240 = 8r$$

$$-5r = -240$$

$$r = 48, \text{ silly!}$$

SKILLS

In Exercises 9–18, for each point shown in the xy -plane, write the corresponding ordered pair and name the quadrant in which it lies or the axis on which it lies.



- | | | | |
|-------|-------|-------|-------|
| 9. A | 10. B | 11. C | 12. D |
| 13. E | 14. F | 15. G | 16. H |
| 17. I | 18. J | | |

