$x^2+y^2+2dx+2ey+f=0$

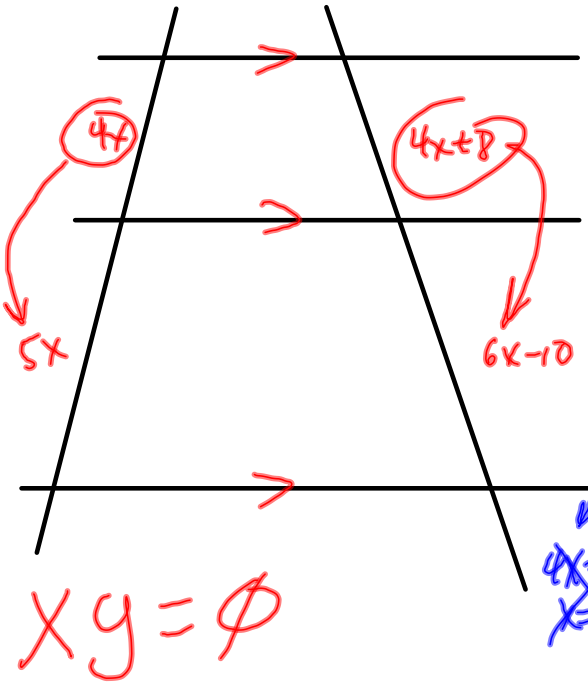
$a=\pi r^2$

Good Afternoon!

ake sure ur rdy2go

when the bell rings!

(31)



$\frac{4x}{5x} = \frac{(4x+8)}{(6x-10)}$

$4x(6x-10) = 5x(4x+8)$

$24x^2-40x = 20x^2+40x$

$-20x^2-40x \quad -20x^2-40x$

$4x^2-80x = 0$

$4x\cdot x \quad -4x\cdot 20$

$4x(x-20) = 0$

$4x=0$

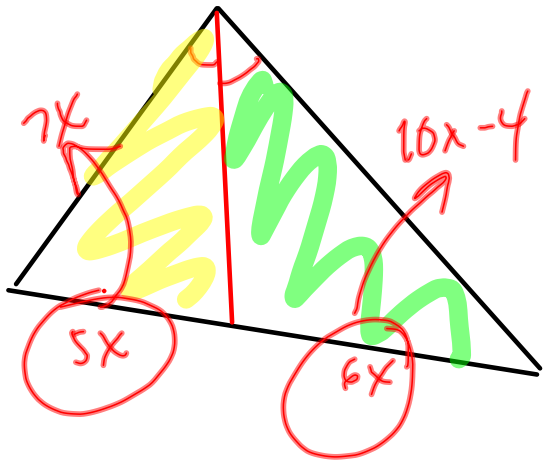
$x=0$

$x-20=0$

$x=20$

$xy=\phi$

32



$\frac{5x}{7x} = \frac{6x}{10x-4}$

$5x(10x-4) = 42x^2$

$50x^2 - 20x = 42x^2$

$-42x^2 \quad -42x^2$

$8x^2 - 20x = 0$

$4x(2x-5) = 0$

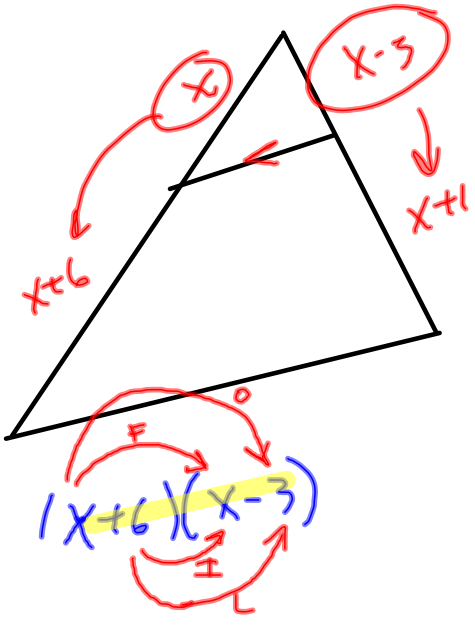
$4x = 0$ $\quad x = 0$

$2x - 5 = 0$

$2x = 5$

$x = \frac{5}{2} = 2.5$

33



FOIL

First
Outer
Inner
Last

$(x+6)(x-3)$

F O I L

$x \cdot x - 3 \cdot x + 6 \cdot x - 3 \cdot 6$

$x^2 - 3x + 6x - 18$

$x^2 + 3x - 18$

$\frac{x}{x+6} = \frac{x-3}{x+1}$

$x(x+1) = (x+6)(x-3)$

$x^2 + x = x^2 + 3x - 18$

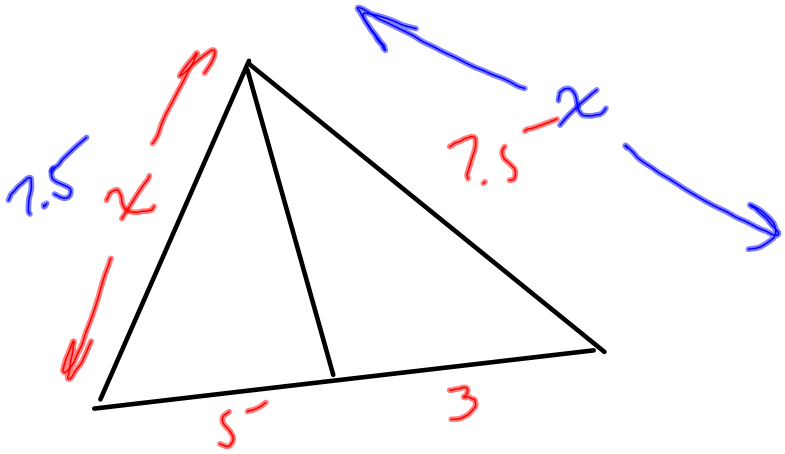
$-x^2 \quad -x^2 \quad -x$

$0 = 2x - 18$

$18 = 2x$

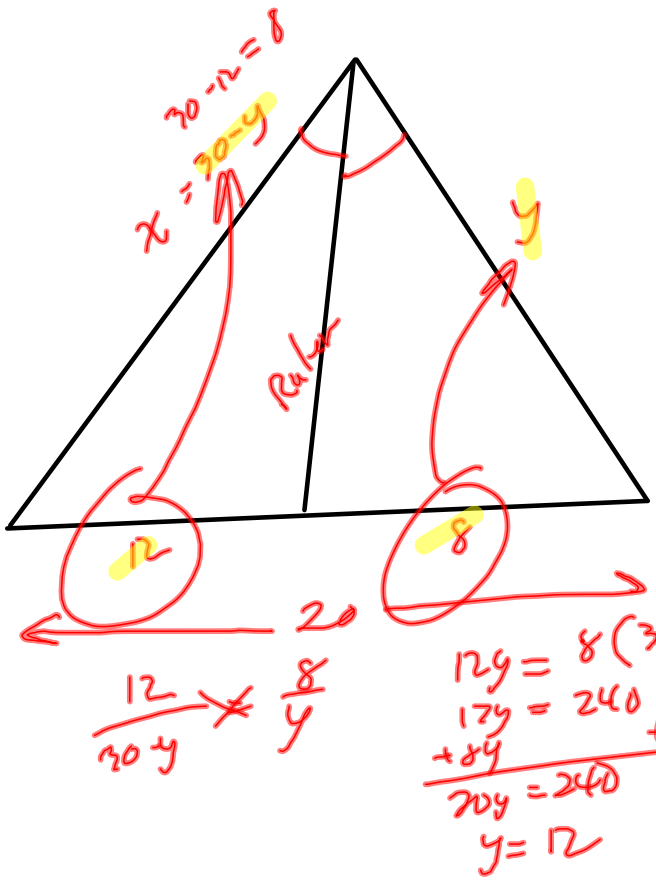
$9 = x$

(36)



$\frac{5}{x} = \frac{3}{7.5}$ option 1 OR $\frac{5}{7.5} = \frac{3}{x}$ option 2

(29)



$P = 50$

$P = x + y + 20$

$50 = x + y + 20$

$30 = x + y$

$x = 30 - y$

$\frac{12}{30-y} \times \frac{8}{y}$

$12y = 8(30-y)$

$12y = 240 - 8y$

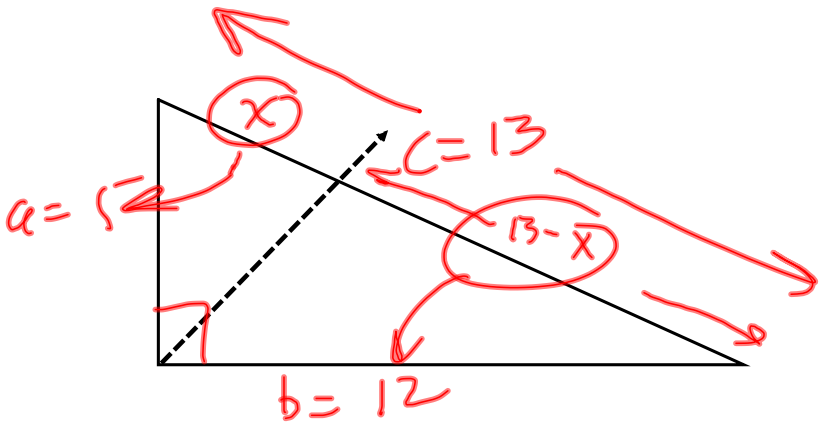
$+8y \quad +8y$

$20y = 240$

$y = 12$

$x = 8$

27



$5^2 + 12^2 = c^2$

$c = 13$

Thm 8-6: Perimeters & Areas of Similar Figures

Given 2 similar figures with a similarity ratio (SR) of $\frac{a}{b}$

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SR = ratio of perimeters

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SR = ratio of perimeters: $\frac{a}{b} = \frac{?}{?}$

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Given 2 similar figures with a similarity ratio (SR) of $\frac{a}{b}$

SR = ratio of perimeters: $\frac{a}{b} = \frac{Perim_a}{?}$

Thm 8-6: Perimeters & Areas of Similar Figures

Given 2 similar figures with a similarity ratio (SR) of $\frac{a}{b}$

SR = ratio of perimeters: $\frac{a}{b} = \frac{Perim_a}{Perim_b}$

Thm 8-6: Perimeters & Areas of Similar Figures

Given 2 similar figures with a similarity ratio (SR) of $\frac{a}{b}$

SR = ratio of perimeters: $\frac{a}{b} = \frac{Perim_a}{Perim_b}$

SR^2 = ratio of areas

Thm 8-6: Perimeters & Areas of Similar Figures

Given 2 similar figures with a similarity ratio (SR) of $\frac{a}{b}$

SR = ratio of perimeters: $\frac{a}{b} = \frac{Perim_a}{Perim_b}$

SR^2 = ratio of areas: $\frac{a^2}{b^2} = \frac{?}{?}$

Thm 8-6: Perimeters & Areas of Similar Figures

Given 2 similar figures with a similarity ratio (SR) of $\frac{a}{b}$

SR = ratio of perimeters: $\frac{a}{b} = \frac{Perim_a}{Perim_b}$

SR^2 = ratio of areas: $\frac{a^2}{b^2} = \frac{Area_a}{?}$

Thm 8-6: Perimeters & Areas of Similar Figures

Given 2 similar figures with a similarity ratio (SR) of $\frac{a}{b}$ or a:b

SR = ratio of perimeters: $\frac{a}{b} = \frac{Perim_a}{Perim_b}$

SR^2 = ratio of areas: $\frac{a^2}{b^2} = \frac{Area_a}{Area_b}$

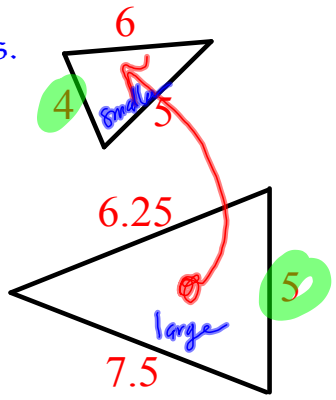
1 Go to the next pag

Thm 8-6 Example

These Δ's are similar.

1) Find ratio (larger to smaller) of their perims.

2) Find ratio (larger to smaller) of their areas.



(1) SR = ratio of perims

$SR = \frac{5}{4}$ (larger / smaller)

(2) SR^2 = ratio of areas

$= \frac{25}{16}$

2

Thm 8-6 Example...

3) The ratio of the lengths of the corresponding sides of two regular octagons is 8:3. The area of the larger is 320ft^2. Find the area of the smaller.

SR is 8:3 or $\frac{8}{3}$ (larger / smaller)

$SR^2 = \frac{\text{area large}}{\text{area small}}$

$\frac{8^2}{3^2} = \frac{320}{x}$

$\frac{64}{9} = \frac{320}{x}$

$x = \frac{320 \cdot 9}{64} = 45$

3

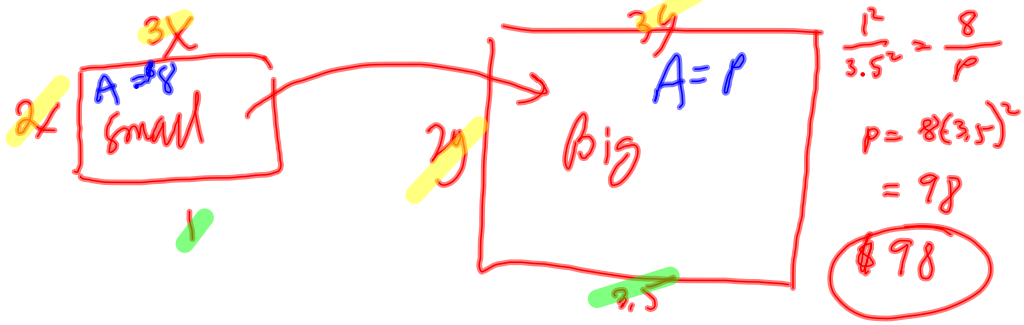
Thm 8-6 Example...

4) Benita plants the same crop in 2 rectangular fields, each with side lengths in a ratio of 2:3. this info is a distractor — not needed.

Each dimension of the larger field is $3\frac{1}{2}$ times the dimension of the smaller.

Seeding the small field costs $8.

How much does seeding the larger field cost?



$SR : 3.5$

$SR^2 = \frac{\text{area small}}{\text{area big}}$

$\frac{1^2}{3.5^2} = \frac{8}{P}$

$P = 8(3.5)^2$

$= 98$

$98

4

5 **Go to next page...**

Thm 8-6 Example...

[redacted]

The areas of 2 similar polys are $32in^2$ & $72in^2$.

5) What is their SR? $\frac{2}{3}$

6) What is the ratio of their perimeters? $= SR = \frac{2}{3}$

Ratio of areas $= SR^2$ (small → large)

$\frac{32}{72} = SR^2$

$\frac{4}{9} = SR^2$

$\sqrt{\frac{4}{9}} = \sqrt{SR^2}$

$\frac{2}{3} = SR$

6

7 **Go to the next page...**

[redacted]

Thm 8-6 Example...

The SR of 2 similar Δ's is 5:3.

The perim of the smaller is 36cm & its area is 18cm^2.

7) Find the perimeter of the larger Δ. =60

8) Find the area of the larger Δ. =50

(7) $\frac{5}{3} \times \frac{P}{36}$

$P = \frac{5 \cdot 36}{3 \cdot 1} = 60$

8

(8) $\frac{25}{9} = \frac{a}{18}$ $a = \frac{25 \cdot 18^2}{9 \cdot 1}$

$= 50$

L8-6 Homework Problems

Pg 456 #1-22, 24, 25-32, 35-37, 40-44