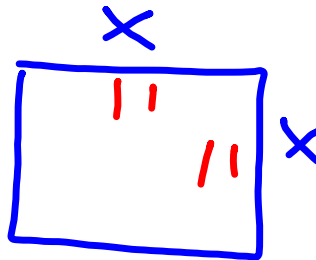
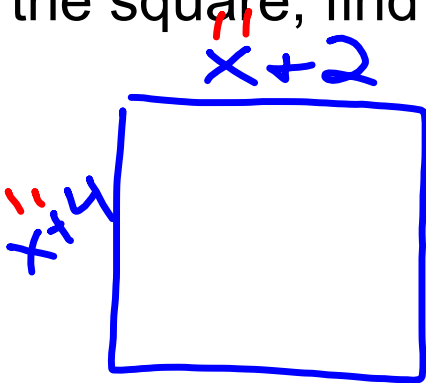


# McQuiz

**Warm up:**

A rectangular piece of plywood is trimmed to make a square by cutting a 4cm strip off the top and a 2cm strip off one side. If the area of the original piece is  $74\text{cm}^2$  greater than the area of the square, find the dimensions of the rectangle.



$$(x+4)(x+2) - x^2 = 74$$

$$\cancel{x^2} + 6x + 8 - \cancel{x^2} = 74$$

$$6x + 8 = 74$$

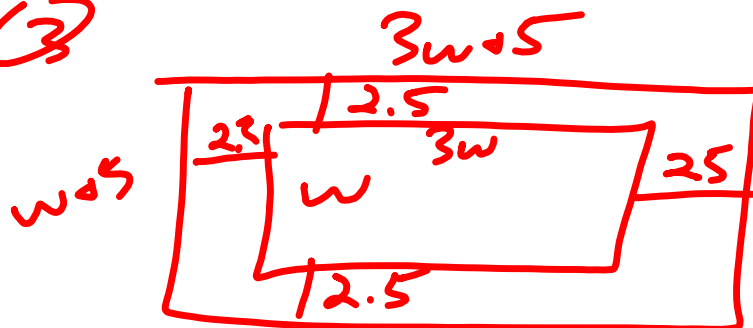
$$\frac{6x}{6} = \frac{66}{6}$$

$$x = 11$$

13cm x 15cm

## HW Solutions

(3)



$$(3w+5)(w+5) - w(3w) = 265$$

$$\cancel{3w^2} + 20w + 25 - \cancel{3w^2} = 265$$

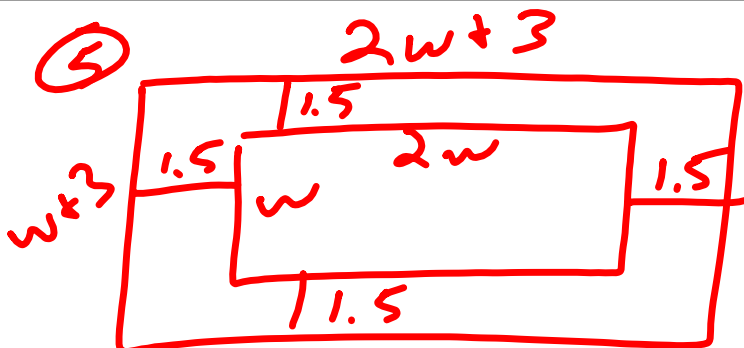
$$\phantom{\cancel{3w^2}} - 25 \phantom{+ 20w} = 265$$

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$$\frac{20w}{20} = \frac{240}{20}$$

$$w = 12$$

12m x 36m

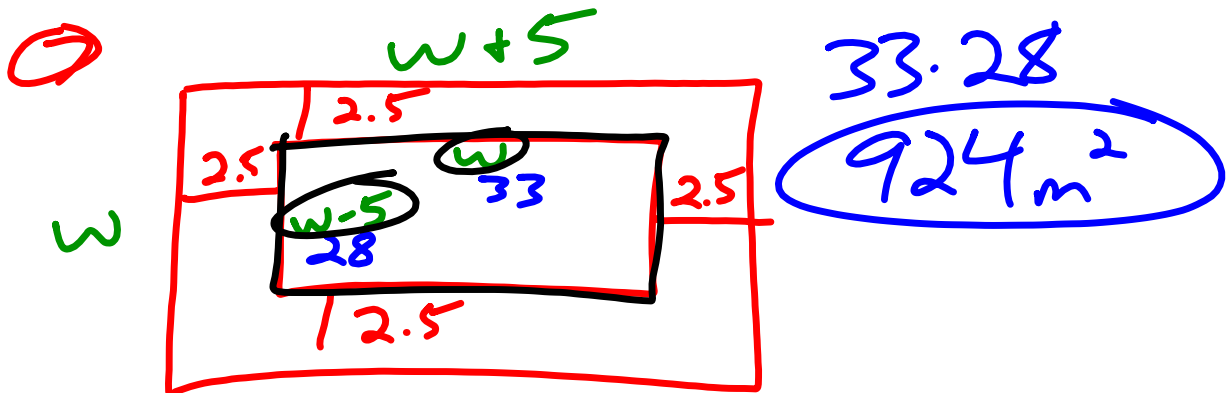


$5m \times 10m$

$$(2w+3)(w+3) - w(2w) = 54$$

$$\cancel{2w^2} + 9w + 9 - \cancel{2w^2} = 54$$

$$\frac{9w}{9} = \frac{45}{9} \quad w = 5$$

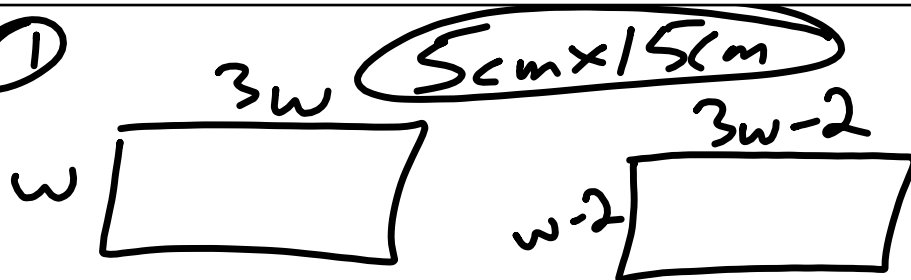


$$w(w+5) - w(w-5) = 330$$

$$w^2 + 5w - w^2 + 5w = 330$$

$$\frac{10w}{10} = \frac{330}{10} \quad w = 33$$

①



$$w(3w) - (w-2)(3w-2) = 36$$

$$3w^2 - (3w^2 - 8w + 4) = 36$$

$$\cancel{3w^2} - \cancel{3w^2} + 8w - 4 = 36$$

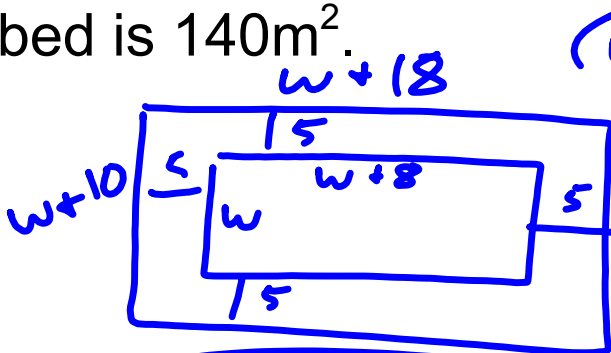
$$\frac{8w}{8} = \frac{40}{8} \quad w = 5$$

For the first 2h of her trip, Ginny Chang drove at her normal speed, but then road repairs forced her to drive 10mi/h slower than her normal speed. Still, she made the trip in 3h. Find her normal speed.

	$r$	$t$	$d$
normal	$r$	2	$2r$
repairs	$r-10$	1	$r-10$

no solution  
not enough information

A lawn is 8m longer than it is wide. It is surrounded by a flower bed 5m wide. Find the dimensions of the lawn if the area of the flower bed is  $140\text{m}^2$ .



no solution

$$\begin{aligned}
 (w+10)(w+18) - w(w+8) &= 140 \\
 w^2 + 28w + 180 - w^2 - 8w &= 140 \\
 20w + 180 &= 140 \\
 -180 & \quad -180 \\
 \hline
 20w &= -40 \\
 \frac{20}{20} & \quad \frac{-40}{20} \\
 \hline
 w &= -2
 \end{aligned}$$



2.7 dimes

Raoul says he has equal numbers of dimes and quarters and three times as many nickels as dimes. The value of his nickels and dimes is 50 cents more than the value of his quarters. How many of each kind of coin does he have?

	\$	#	Total \$
n	5	3d	15d
d	10	d	10d
q	25	d	25d

no solution

$$\begin{array}{r}
 15d + 10d = 25d + 50 \\
 25d = 25d + 50 \\
 -25d \quad -25d \\
 \hline
 0 = 50
 \end{array}$$

1) A picture is 1in longer than it is wide. It is put into a frame  $\frac{1}{2}$ in wide. If the area of the frame itself is  $8\text{in}^2$ , how big is the picture?

2) Roy says he has more nickels than dimes. If he has \$5.20, how many of each coin does he have?

3) Esteban has 16 coins that total \$3.00. If he has only nickels and quarters, how many quarters does he have?

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