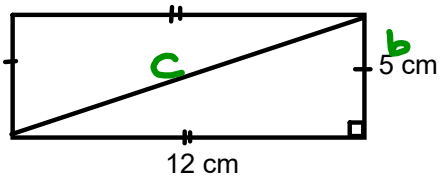
Find the length of the diagonal of the rectangle.

From last day



$c^2 = a^2 + b^2$

$c^2 = (12\text{cm})^2 + (5\text{cm})^2$

$c^2 = 144\text{cm}^2 + 25\text{cm}^2$

$c^2 = 169\text{cm}^2$

$\sqrt{c^2} = \sqrt{169\text{cm}^2}$

$c = 13\text{cm}$

Looking for "c"

$c^2 = a^2 + b^2$

$c^2 = (\quad)^2 + (\quad)^2$

$c^2 = \_\_ + \_\_$

$c^2 = \_\_\_\_$

$\sqrt{c^2} = \sqrt{\quad}$ Same

$c \approx \_\_\_\_$

Missing leg

$b^2 = c^2 - a^2$ (c: longest)

$b^2 = (\quad)^2 - (\quad)^2$

$b^2 = \_\_ - \_\_$

$b^2 = \_\_\_\_$

$\sqrt{b^2} = \sqrt{\quad}$ Same

$b \approx \_\_\_\_$

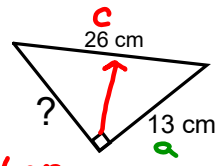
Warm Up Grade 8

You can use your notes
Do both sides.

Find the length of the missing side (Use calculators but show your work)

You can use your notes

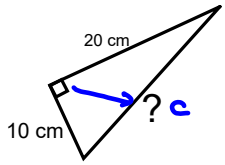
a)



$c = 26cm$
$a = 13cm$
$b = ?$

$b^2 = c^2 - a^2$
$b^2 = (26cm)^2 - (13cm)^2$
$b^2 = 676cm^2 - 169cm^2$
$b^2 = 507cm^2$
$\sqrt{b^2} = \sqrt{507cm}$
$b \approx 22.5cm$

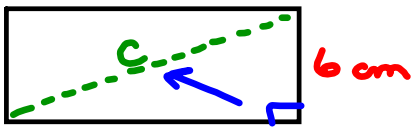
b)



$a = 10\,cm$
$b = 20cm$
$c = ?$

$c^2 = a^2 + b^2$
$c^2 = (10cm)^2 + (20cm)^2$
$c^2 = 100cm^2 + 400cm^2$
$c^2 = 500cm^2$
$\sqrt{c^2} = \sqrt{500cm^2}$
$c \approx 22.3cm$

A rectangular pencil case has dimensions 10 cm by 6 cm. What is the longest pencil that can fit in the pencil case?



$c^2 = a^2 + b^2$
$c^2 = (10cm)^2 + (6cm)^2$
$c^2 = 100cm^2 + 36cm^2$
$c^2 = 136cm^2$
$\sqrt{c^2} = \sqrt{136cm^2}$
$c \approx 11.6cm$

The longest pencil will be 11.6cm long.

Class/Homework

page 34 #3ab, 4ab, 5abcd, 6abcd

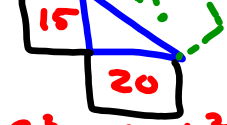
given area

given $a^2 =$ $b^2 =$ add these # to c^2

subtract # to get a^2

Like 3a

Ex) Area given ?



$c^2 = a^2 + b^2$

$15 + 20$

$c^2 = 35$