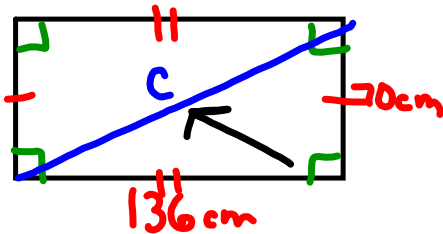


May 20

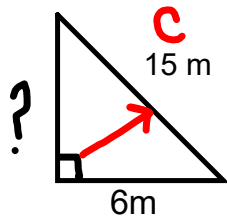
- 1) Can a rectangular hockey bag with dimensions of 136 cm by 70 cm, hold a hockey stick of lengths 150 cm?



$$\begin{aligned}
 c^2 &= a^2 + b^2 \\
 c^2 &= (136\text{cm})^2 + (70\text{cm})^2 \\
 c^2 &= 18496\text{cm}^2 + 4900\text{cm}^2 \\
 c^2 &= 23396\text{cm}^2 \\
 \sqrt{c^2} &= \sqrt{23396\text{cm}^2} \\
 c &\approx 152.9 \\
 c &\approx 153\text{cm}
 \end{aligned}$$

A stick of 150cm will fit since diagonal is 153cm in length.

- 2) Find the missing side



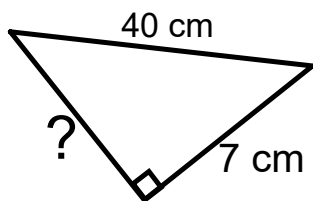
Given
 $c = 15\text{m}$
 $b = 6\text{m}$
 $a = ?$

$$\begin{aligned}
 a^2 &= c^2 - b^2 \\
 a^2 &= (15\text{m})^2 - (6\text{m})^2 \\
 a^2 &= 225\text{m}^2 - 36\text{m}^2 \\
 a^2 &= 189\text{m}^2 \\
 \sqrt{a^2} &= \sqrt{189\text{m}^2} \\
 a &\approx 13.7\text{m}
 \end{aligned}$$

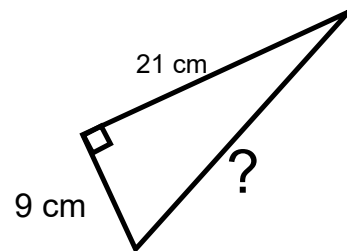
**Warm Up Grade 8****Date:** _____

Find the length of the missing side (Use calculators but show your work)
You can use your notes

a)



b)





Warm Up Grade 8

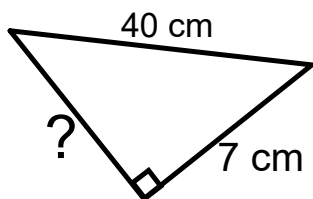
Date: _____

TEST
Tuesday
Feb 27

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

You can use your notes

a)



Given

$$a = ?$$

$$b = 7 \text{ cm}$$

$$c = 40 \text{ cm}$$

$$a^2 = c^2 - b^2$$

$$a^2 = (40 \text{ cm})^2 - (7 \text{ cm})^2$$

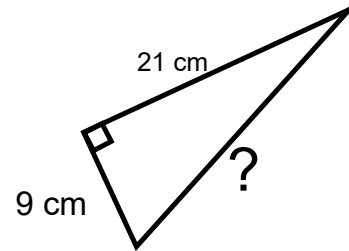
$$a^2 = 1600 \text{ cm}^2 - 49 \text{ cm}^2$$

$$a^2 = 1551 \text{ cm}^2$$

$$\sqrt{a^2} = \sqrt{1551 \text{ cm}^2}$$

$$a \approx 39.4 \text{ cm}$$

b)



Given

$$a = 9 \text{ cm}$$

$$b = 21 \text{ cm}$$

$$c = ?$$

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

$$c^2 = (9 \text{ cm})^2 + (21 \text{ cm})^2$$

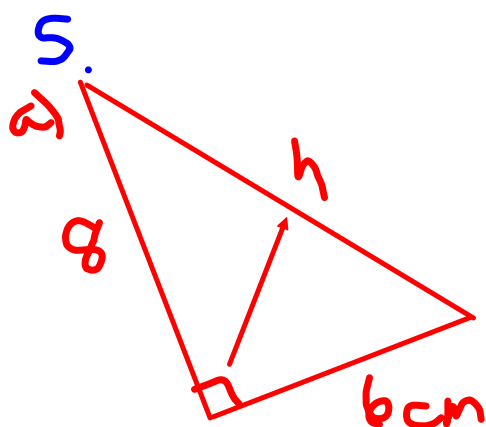
$$c^2 = 81 \text{ cm}^2 + 441 \text{ cm}^2$$

$$c^2 = 522 \text{ cm}^2$$

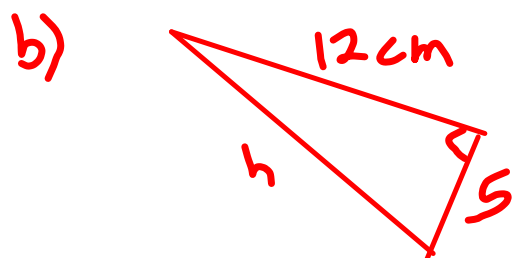
$$\sqrt{c^2} = \sqrt{522 \text{ cm}^2}$$

$$c \approx 22.8 \text{ cm}$$

POP Quiz
Quiz 2 in folder



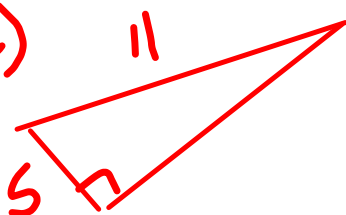
$$\begin{aligned}
 c^2 &= a^2 + b^2 \\
 c^2 &= 8^2 + 6^2 \\
 c^2 &= 64 + 36 \\
 c^2 &= 100 \\
 \sqrt{c^2} &= \sqrt{100} \\
 c &= 10 \text{ cm}
 \end{aligned}$$



$$\begin{aligned}
 c^2 &= a^2 + b^2 \\
 c^2 &= 12^2 + 5^2 \\
 c^2 &= 144 + 25 \\
 c^2 &= 169 \\
 \sqrt{c^2} &= \sqrt{169} \\
 c &= 13 \text{ cm}
 \end{aligned}$$

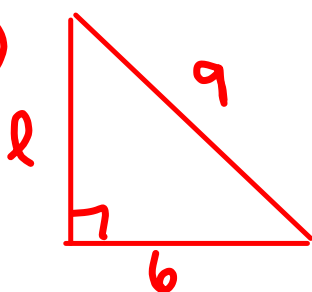
6

c)



$$\begin{aligned}
 c^2 &= a^2 + b^2 \\
 11^2 &= a^2 + 5^2 \\
 121 &= a^2 + 25 \\
 121 - 25 &= a^2 + 25 - 25 \\
 96 &= a^2 \\
 \sqrt{96} &= \sqrt{a^2} \\
 9.8 &= a
 \end{aligned}$$

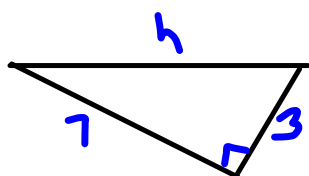
d)



$$\begin{aligned}
 c^2 &= a^2 + b^2 \\
 9^2 &= a^2 + 6^2 \\
 81 &= a^2 + 36 \\
 81 - 36 &= a^2 + 36 - 36 \\
 45 &= a^2 \\
 \sqrt{45} &= \sqrt{a^2} \\
 6.7 &= a
 \end{aligned}$$

Pg 34

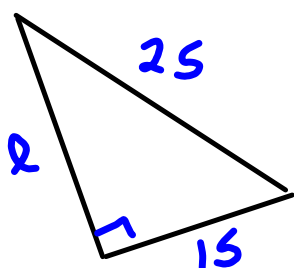
7a)



Homework solutions

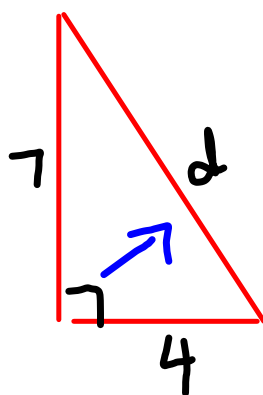
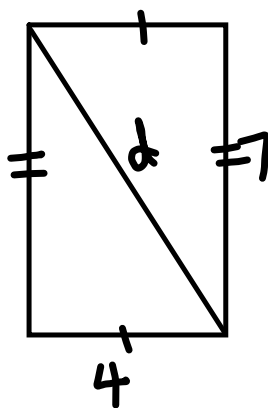
$$\begin{aligned}
 c^2 &= a^2 + b^2 \\
 c^2 &= 7^2 + 3^2 \\
 c^2 &= 49 + 9 \\
 c^2 &= 58 \\
 \sqrt{c^2} &= \sqrt{58} \\
 c &= 7.6
 \end{aligned}$$

b)



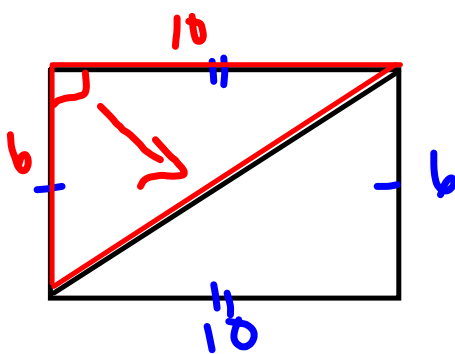
$$\begin{aligned}
 c^2 &= a^2 + b^2 \\
 25^2 &= a^2 + 15^2 \\
 625 &= a^2 + 225 \\
 625 - 225 &= a^2 + 225 - 225 \\
 400 &= a^2 \\
 \sqrt{400} &= \sqrt{a^2} \\
 20 &= a
 \end{aligned}$$

a)
😊

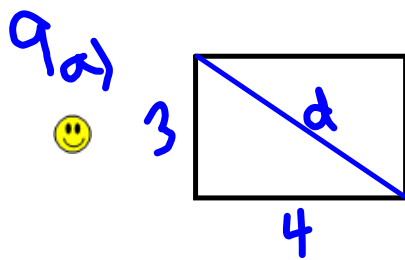


$$\begin{aligned} c^2 &= a^2 + b^2 \\ c^2 &= 7^2 + 4^2 \\ c^2 &= 49 + 16 \\ c^2 &= 65 \\ \sqrt{c^2} &= \sqrt{65} \\ c &= 8.1 \end{aligned}$$

b)
😊



$$\begin{aligned} c^2 &= a^2 + b^2 \\ c^2 &= 10^2 + 6^2 \\ c^2 &= 100 + 36 \\ c^2 &= 136 \\ \sqrt{c^2} &= \sqrt{136} \\ c &= 11.7 \end{aligned}$$

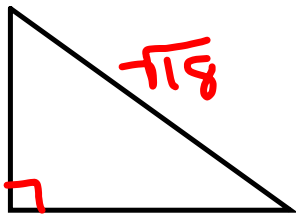


$$\begin{aligned}c^2 &= a^2 + b^2 \\c^2 &= 3^2 + 4^2 \\c^2 &= 9 + 16 \\c^2 &= 25 \\\sqrt{c^2} &= \sqrt{25} \\c &= 5\end{aligned}$$

10.

If you know the side lengths of a right triangle the hypotenuse will be the largest number since it is always the longest side.

12. 😊



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

$$(\sqrt{18})^2 = a^2 + b^2$$

$$18 = a^2 + b^2$$

$$9 + 9 = 18$$

$$9 = a^2 \quad 9 = b^2$$

$$3 = a \quad 3 = b$$

$$16 + 8 = 18$$

$$a^2 = 16 \quad b^2 = 8$$

$$a = \sqrt{16} \quad b = \sqrt{8}$$

$$6 + 12 = 18$$

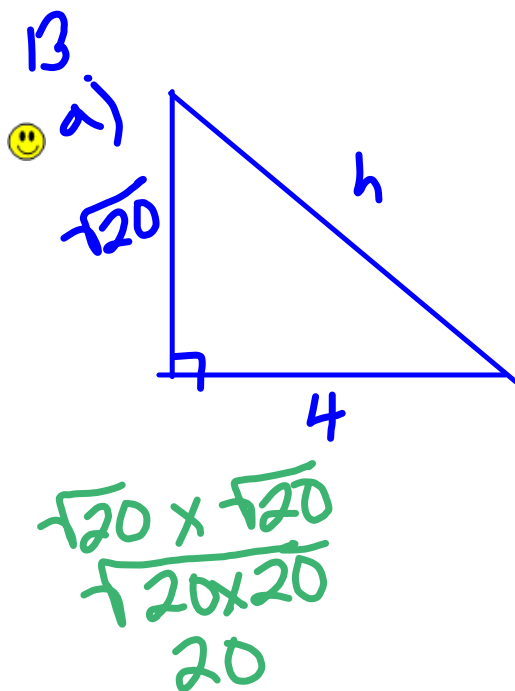
$$a^2 = 6 \quad b^2 = 12$$

$$a = \sqrt{6} \quad b = \sqrt{12}$$

$$1 + 17 = 18$$

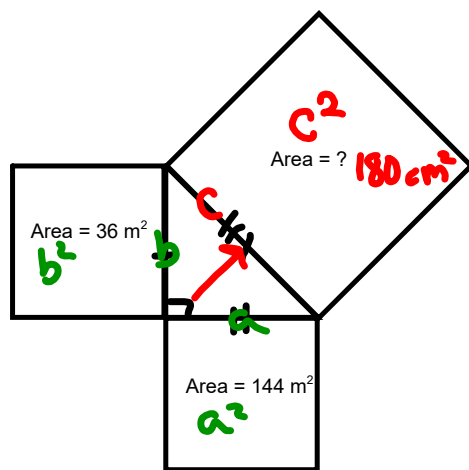
$$a^2 = 1 \quad b^2 = 17$$

$$a = \sqrt{1} \quad b = \sqrt{17}$$



$$\begin{aligned}
 c^2 &= a^2 + b^2 \\
 c^2 &= (\sqrt{20})^2 + 4^2 \\
 c^2 &= 20 + 16 \\
 c^2 &= 36 \\
 \sqrt{c^2} &= \sqrt{36} \\
 c &= 6
 \end{aligned}$$

Find the area of the indicated square

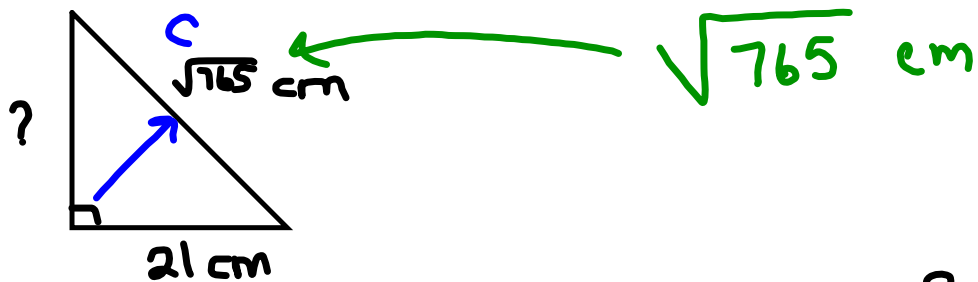


$$c^2 = a^2 + b^2$$

$$c^2 = \underline{144 \text{ cm}^2} + \underline{36 \text{ cm}^2}$$

$$c^2 = 180 \text{ cm}^2$$

Find the length of the missing side



Given

$$c = \sqrt{765} \text{ cm}$$

$$b = 21 \text{ cm}$$

$$a = ?$$

$$a^2 = c^2 - b^2$$

$$a^2 = (\sqrt{765})^2 - (21)^2$$

$$a^2 = \underline{765 \text{ cm}^2} - \underline{441 \text{ cm}^2}$$

$$a^2 = \underline{324 \text{ cm}^2}$$

$$\sqrt{a^2} = \sqrt{324 \text{ cm}^2}$$

$$a \approx 18 \text{ cm}$$

Differently from last day with supply

Class/Homework

pg. 34 - 35

~~pg. 34 - 35~~

5(c,d), 6(a,b), 7(c), 8(c), 9(b,c), 10, 12, 13(c)

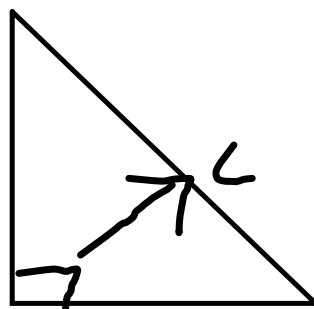
REMEMBER

$$(\sqrt{20})^2 = 20$$

$$\sqrt{20} \times \sqrt{20}$$

$$\sqrt{20 \times 20}$$

$$20$$



Make sure to
check if you
are finding
c or a