

Warmup 3/(# of years it takes for a leap year to happen) + 6

Created by Hanan J.

Get a calculator but DO NOT use it for this warmup!!! Also get a whiteboard, marker, eraser

Please find your warmup sheet from LAST WEEK. We only did Monday. Today, we will continue with Tuesday!

Calculate all without a calculator. Write all answers in scientific notation.

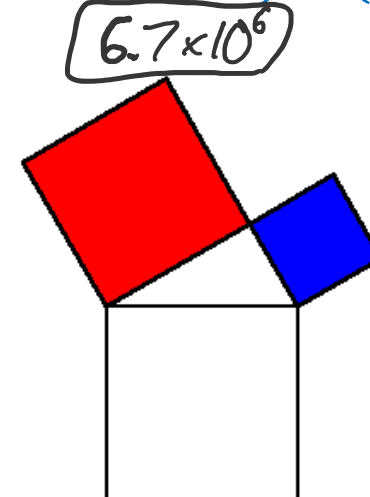
1) $\frac{(8 \times 10^{30})}{(4 \times 10^{26})}$

2×10^4

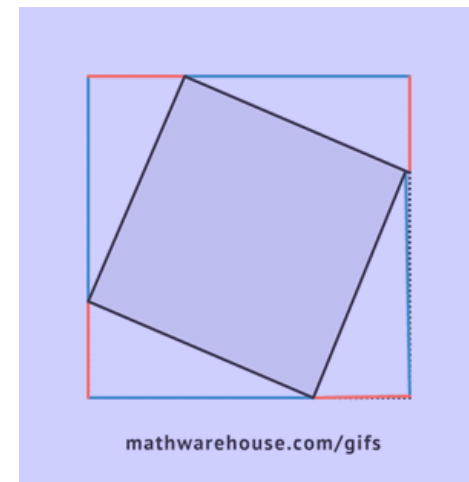
2) $(2.5 \times 10^6)(7 \times 10^3)$

17.5×10^9
↓
 1.75×10^{10}

3) $(7 \times 10^6) - (3 \times 10^5)$



$$\begin{array}{r} 7000000 \\ - 300000 \\ \hline 6700000 \end{array}$$



If you did not have your “TV” worksheet,
but you have it today...

- **Please turn it in right now!**

Honorable Mentions: 3/2

- **Bryan N:** $(1)^{(1)^{(1)^{(1)^{(1)^{(1)}}}} \times 2$
- **Anja K:** $1^0 + 1$
- **Cayden L:** $(4! \div 3) \div 4$
- **Hanan J:** (# of days so far in 2020) – 60
- **Johnathan S:** # of times Obi-Wan Kenobi has said “Hello there” in all Star Wars movies

Honorable Mentions: 3/3

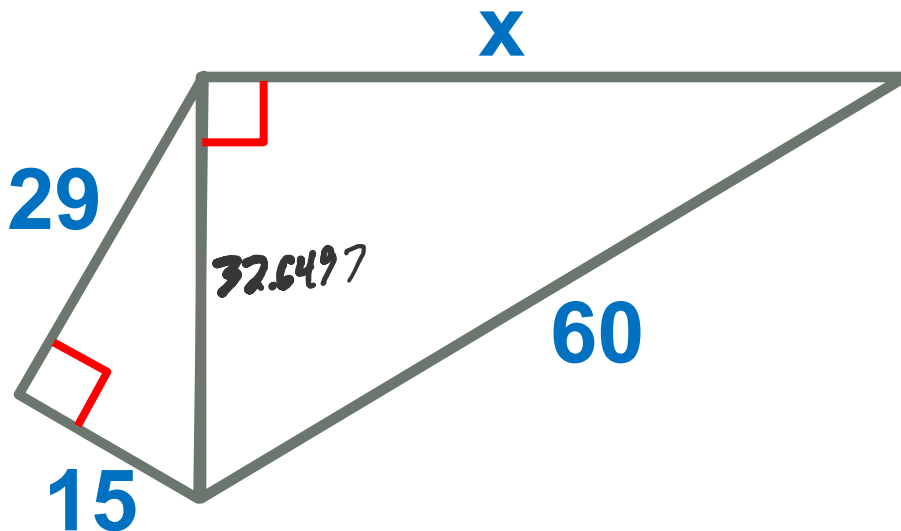
- Saoirse G: $\left(\left((3)^5\right)^6\right)^{21} \times 0 + 3$
- Kara S: (0, 3) without the comma or parentheses
- Ania R: $\left(\left(\left((3 + 3) \div 3\right) + 4\right) \div 3\right) + 1$
- Josephine M: 7 months away from Mr. Lischwe's birthday

Honorable Mentions: 3/4

- Byran N: **The number of bathroom passes you get**
- Hanan J: **# of years it takes for a leap year to happen**
- Reily G: **Fraction equal to 9/12**
- Leilani M: **$|-2 + (-2)|$**

ON YOUR WHITEBOARD:

1. Find x . Show your work, even what you type into the calculator!!!



$$15^2 + 29^2 = x^2$$

$$1066 = x^2$$

$$\sqrt{1066} = x$$

$$32.6497 \approx x$$

$$32.6497^2 + x^2 = 60^2$$

$$1066 + x^2 = 3600$$

$$x^2 = 2534$$

$$x \approx 50.3$$

Table of Contents (2nd Semester)

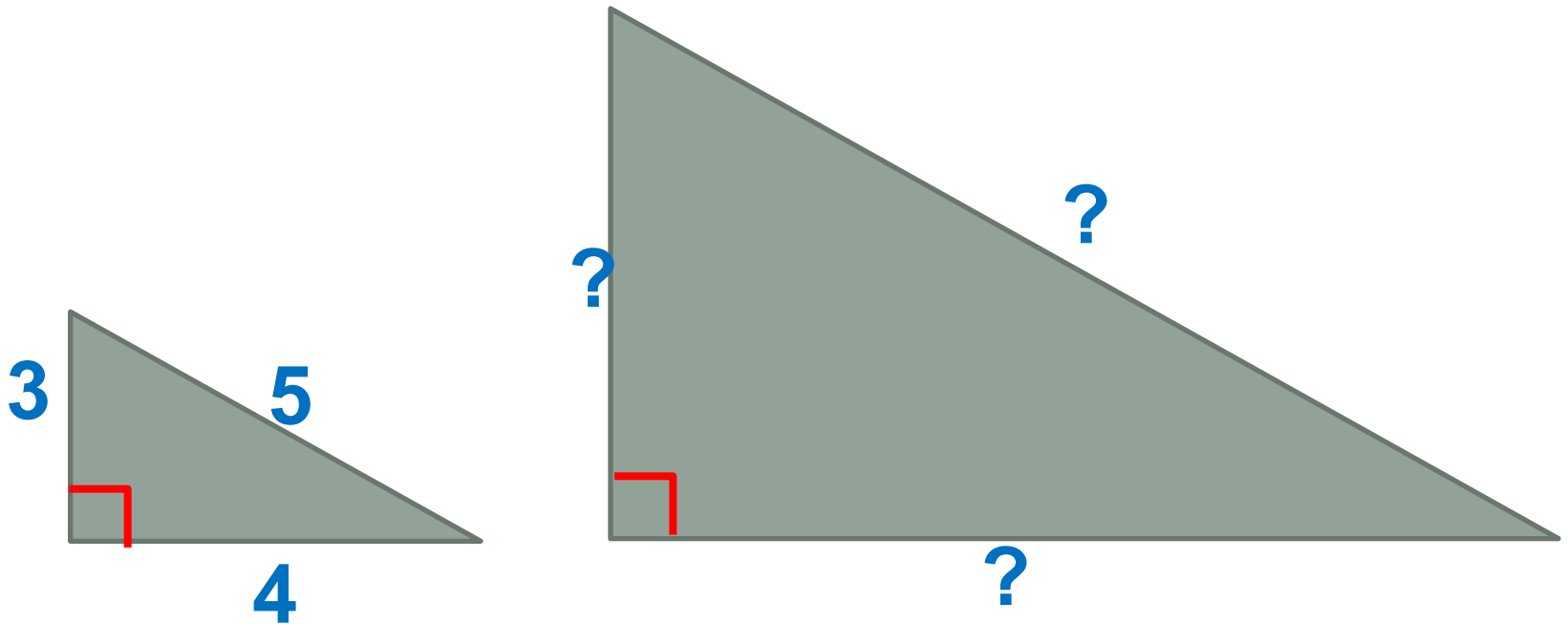
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- p. 2 Zero and Negative Exponents (1.5)**
- p. 3 Multiplying and Dividing Powers (1.3)**
- p. 4 Power to a Power (1.4)**
- p. 5 Scientific Notation (1.6)**
- p. 6 Calculating with Scientific Notation (1.7)**
- p. 7 Angle Basics**
- p. 8 Angles formed by Parallel Lines**
- p. 9 Angle Sums of a Triangle (Guided)**
- p. 10 Transformations (6.1 – 6.3)**
- p. 11 Rotations (Handout)**
- p. 12 Reverse Transformations (Guided)**
- p. 13 Pythagorean Theorem**

Common Pythagorean Triples

- 3, 4, 5
- 5, 12, 13
- 8, 15, 17
- 7, 24, 25
- 9, 40, 41
- MEMORIZE THESE!!! (It will pay off!)

If 3, 4, 5 works...

- What can you do with the numbers to create a **similar** triangle? (Different size but same angles)

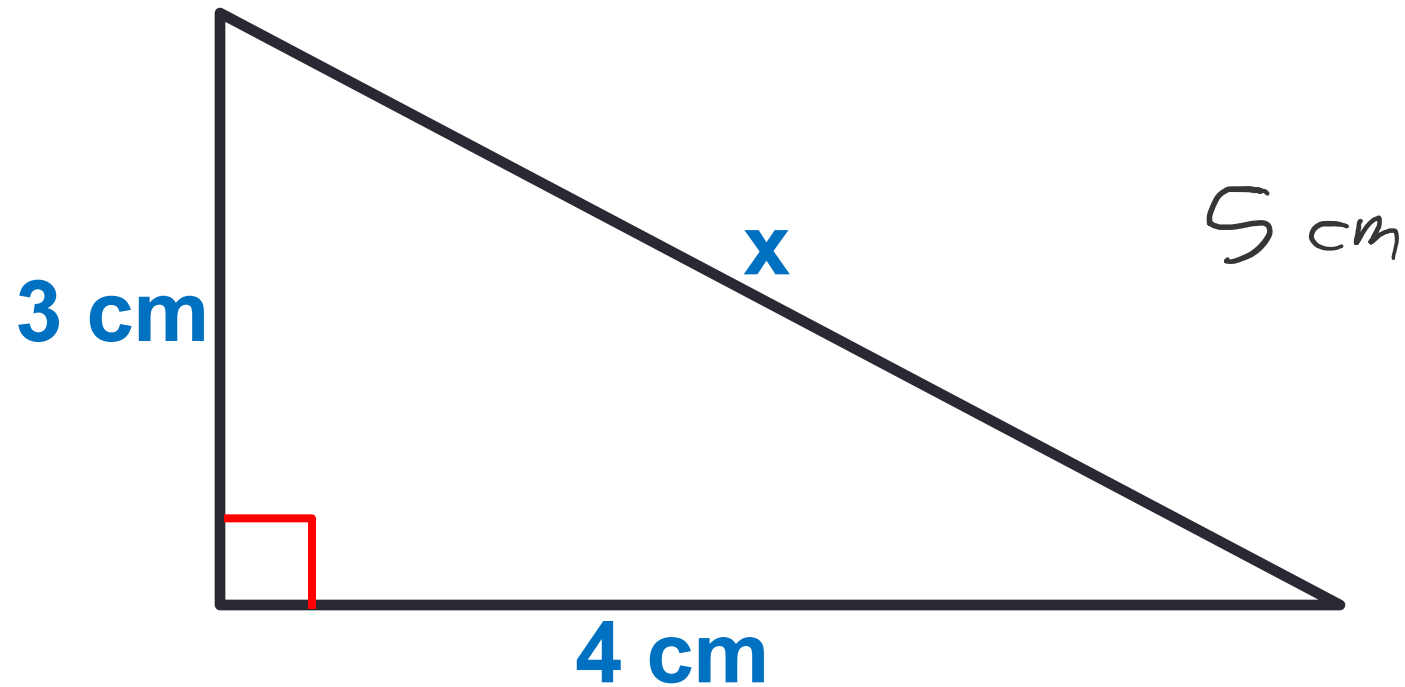


- 3, 4, 5 $\xrightarrow{\text{x2}}$ 6, 8, 10
- 3, 4, 5 $\xrightarrow{\text{x3}}$ 9, 12, 15
- 3, 4, 5 $\xrightarrow{\text{x6}}$ 18, 24, 30
- 3, 4, 5 $\xrightarrow{\text{x100}}$ 300, 400, 500

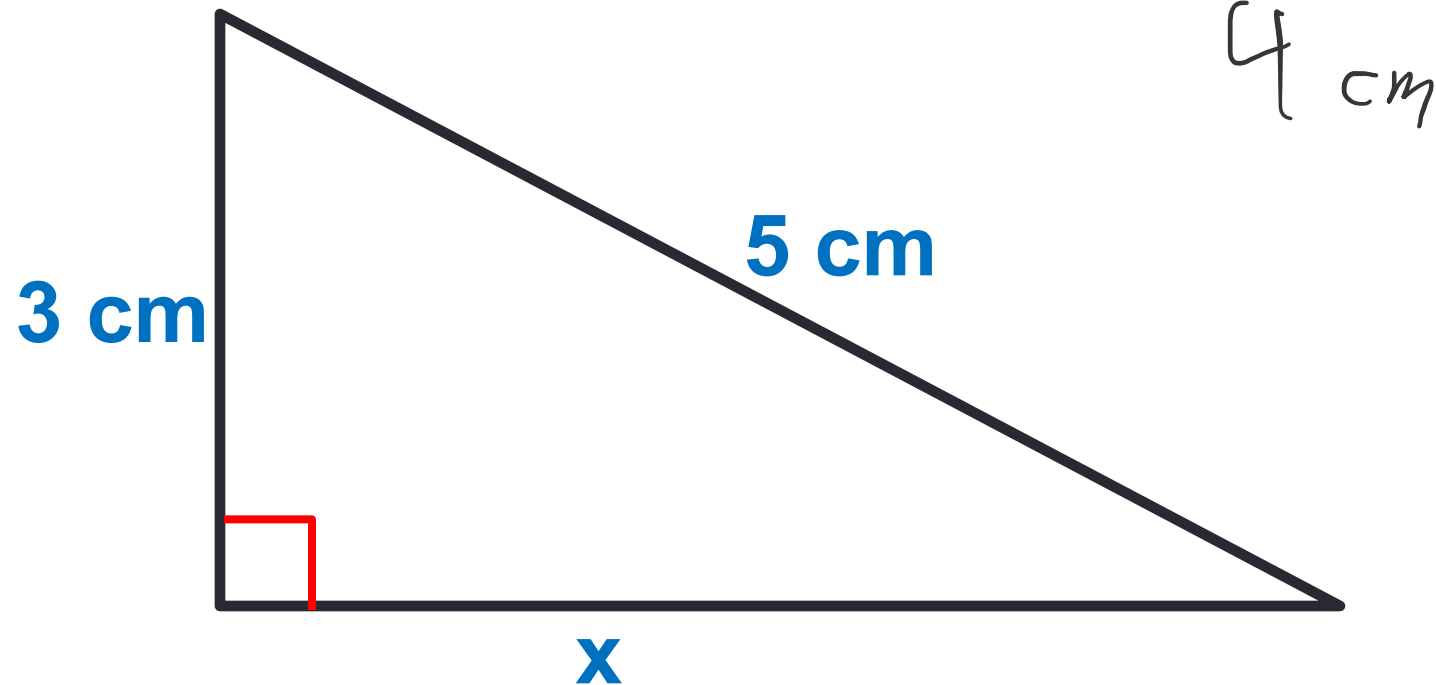
Common Pythagorean Triples

- 3, 4, 5
- 5, 12, 13
- 8, 15, 17
- 7, 24, 25
- 9, 40, 41
- + Any multiple of these!!!
- For example: (6, 8, 10) or (9, 12, 15) or (50, 120, 130)

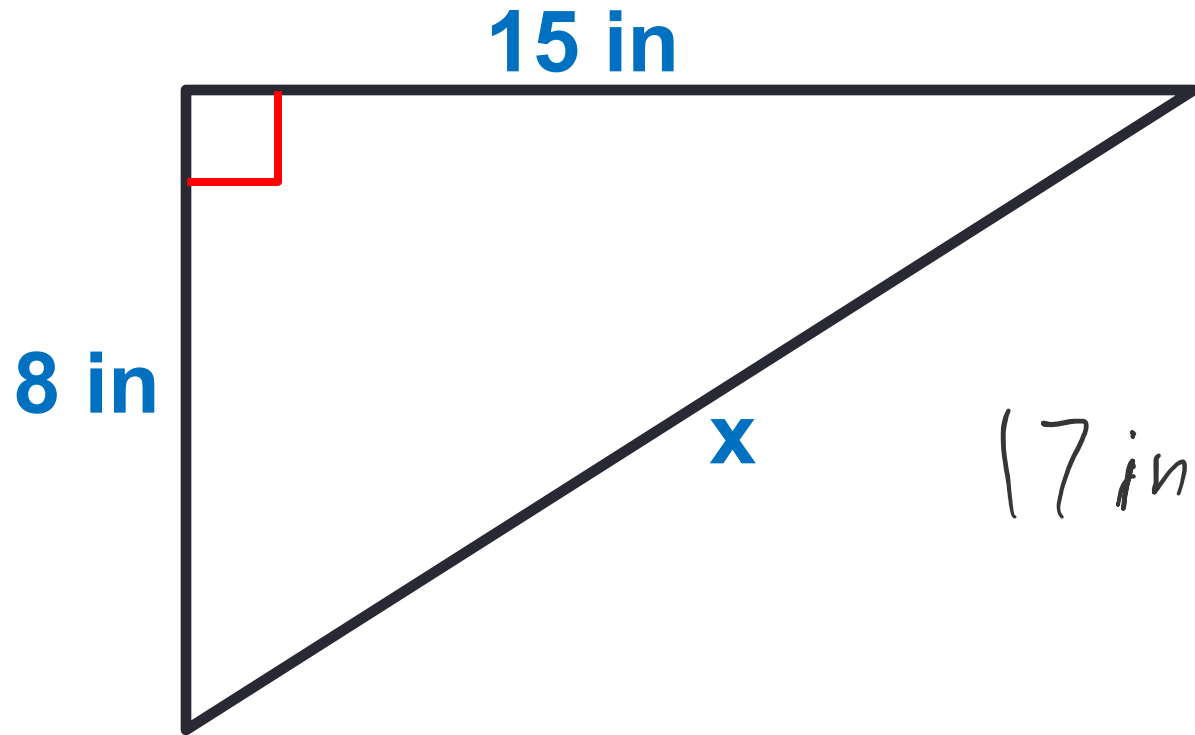
Find the length of the side!



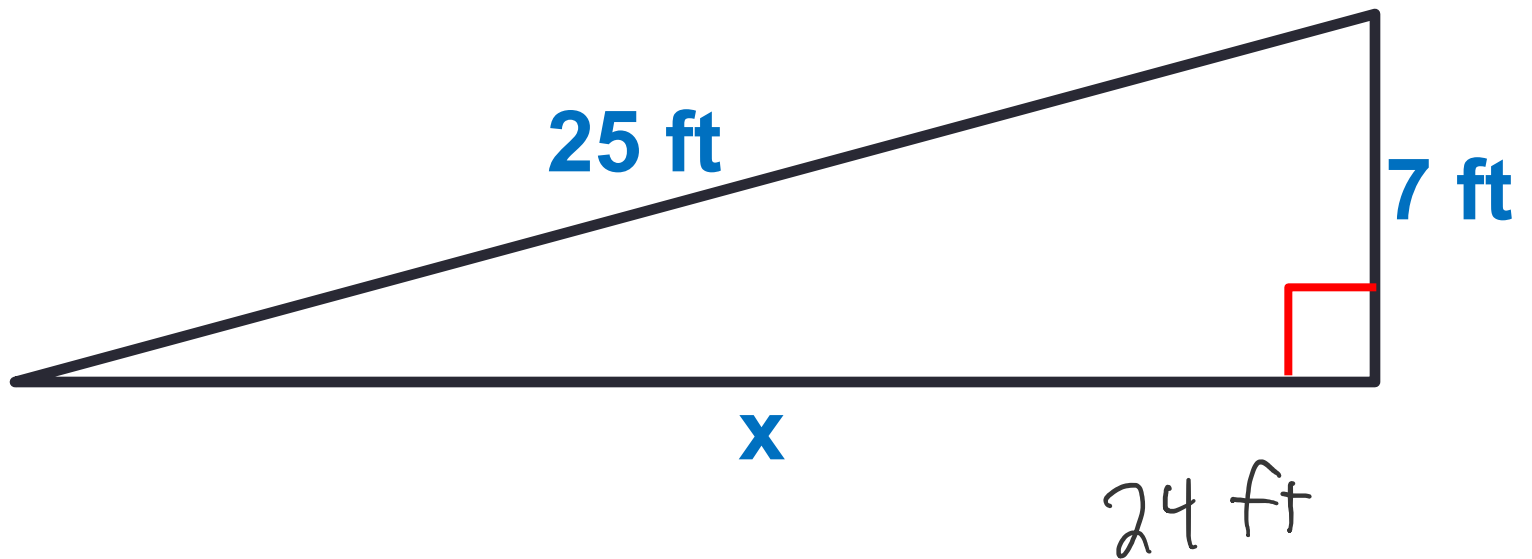
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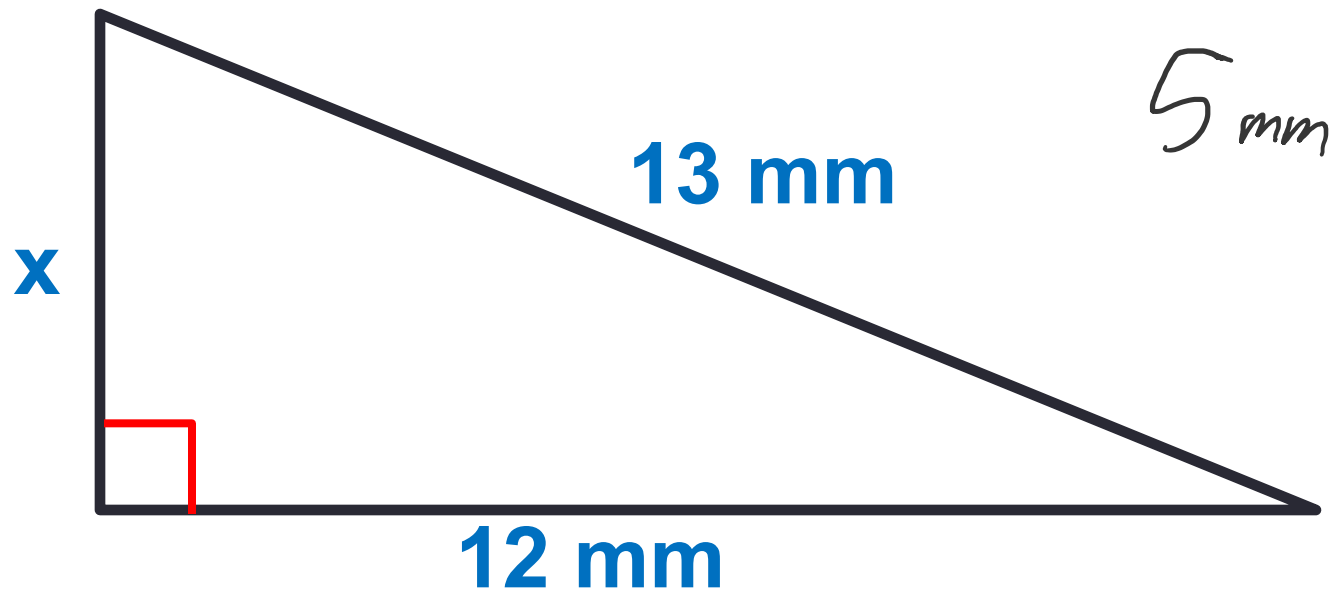
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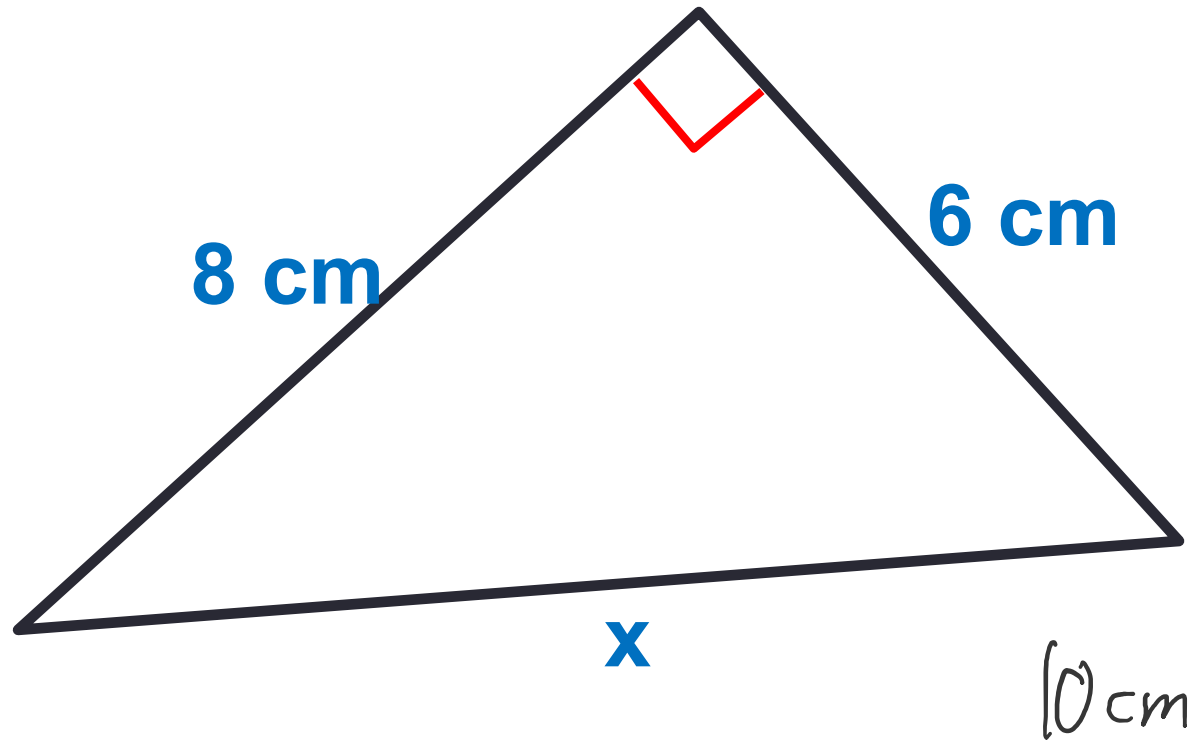
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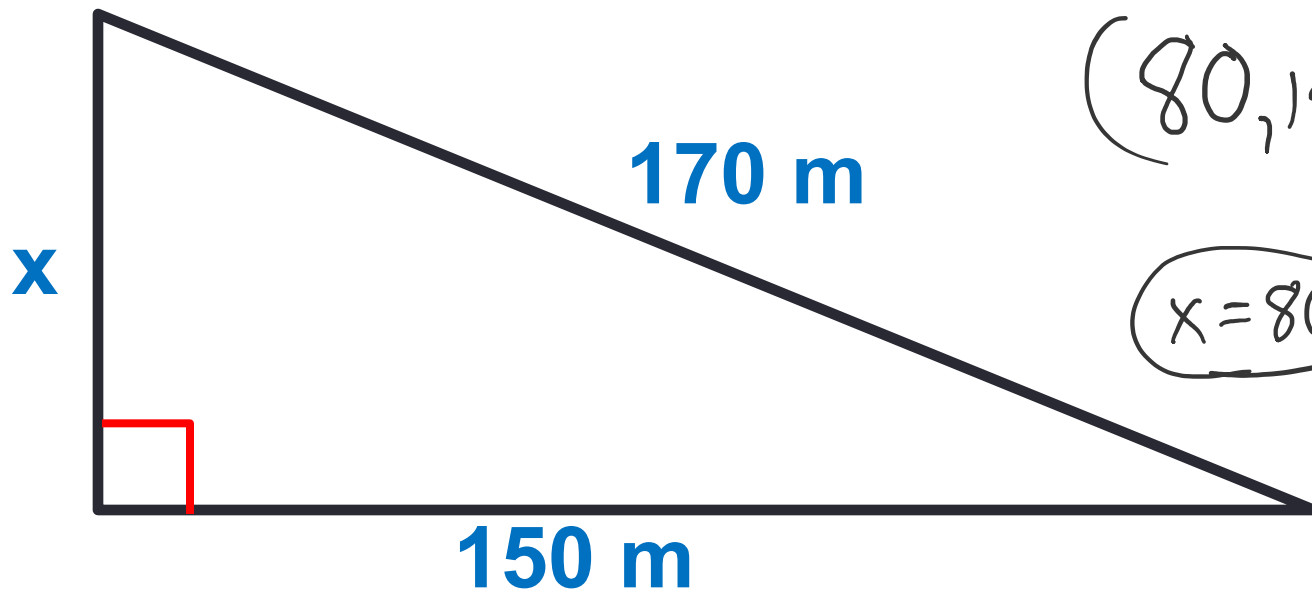
Find the length of the side!



Find the length of the side!



Find the length of the side!



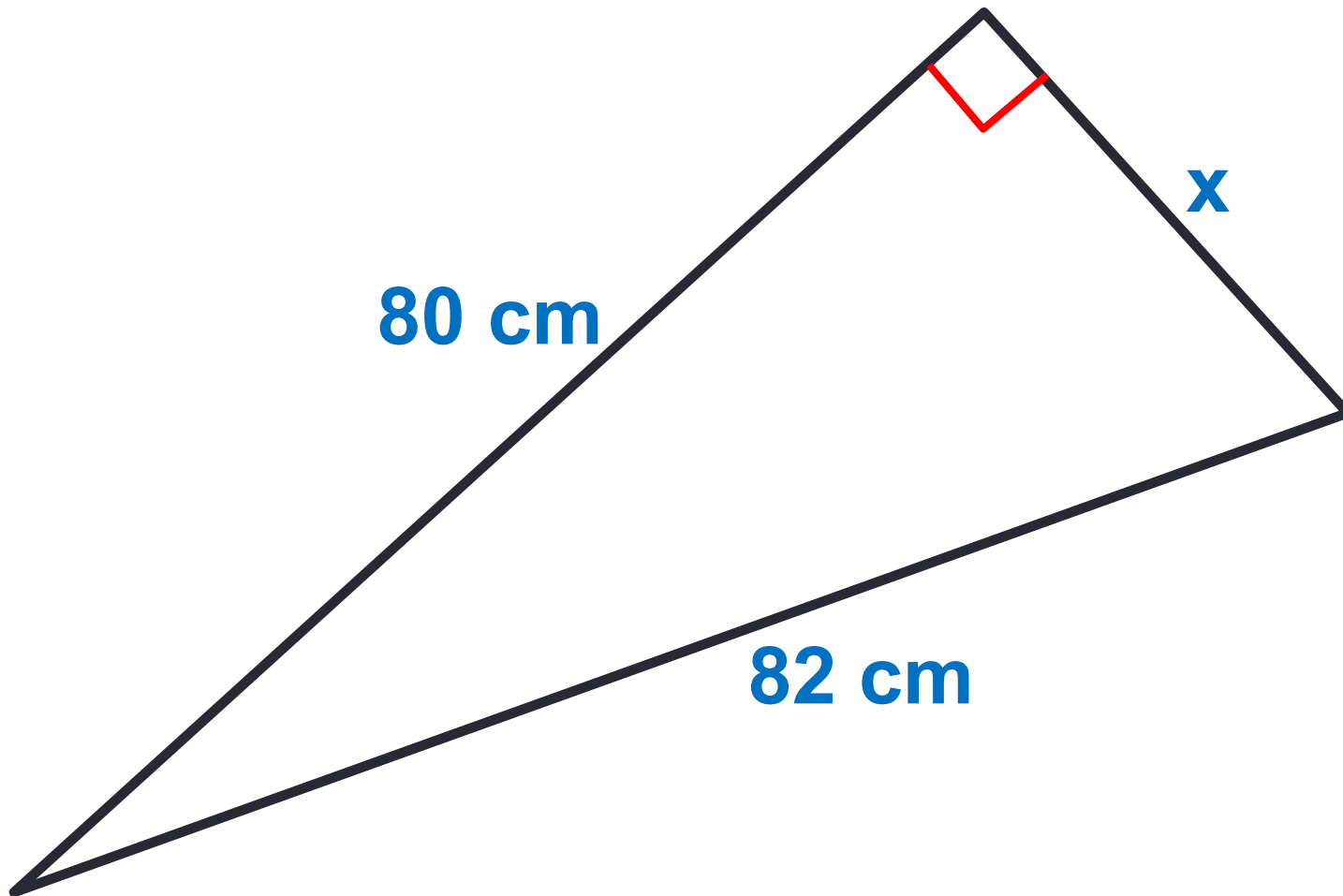
$(8, 15, 17)$

$\downarrow \times 10$

$(80, 150, 170)$

$x = 80\text{ m}$

Find the length of the side!



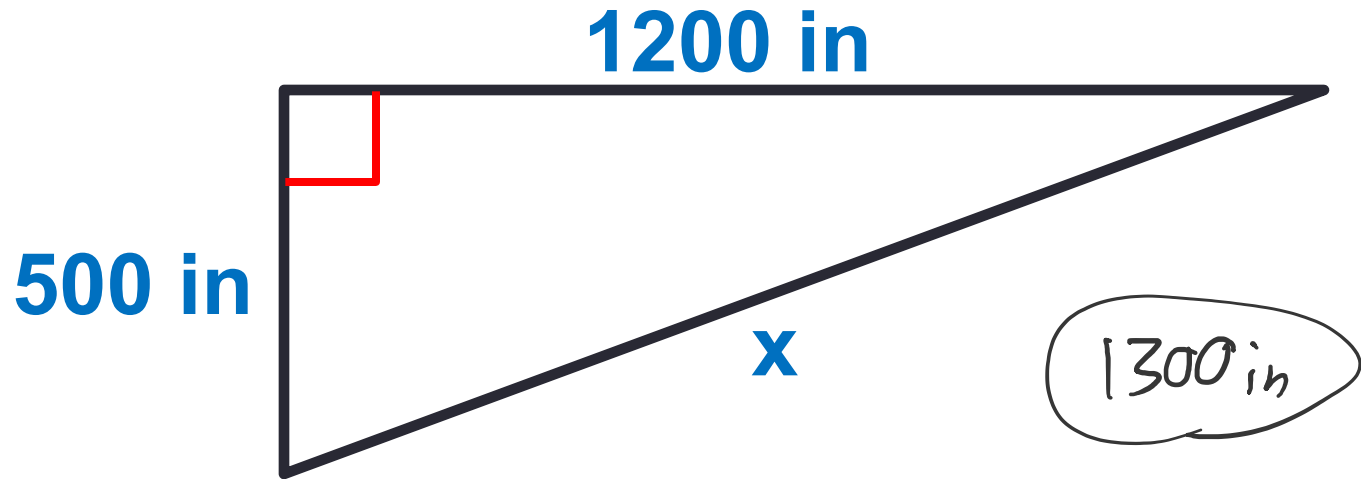
$(9, 40, 41)$

$\downarrow \times 2$

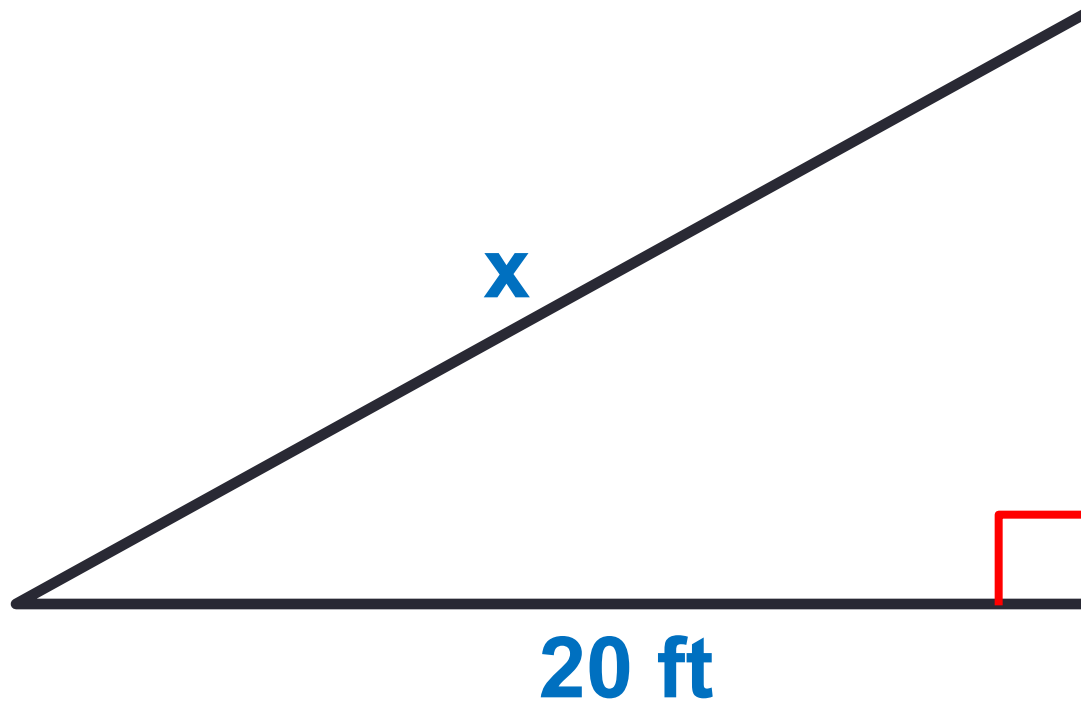
$(18, 80, 82)$

18 cm

Find the length of the side!



Find the length of the side!



$(3, 4, 5)$

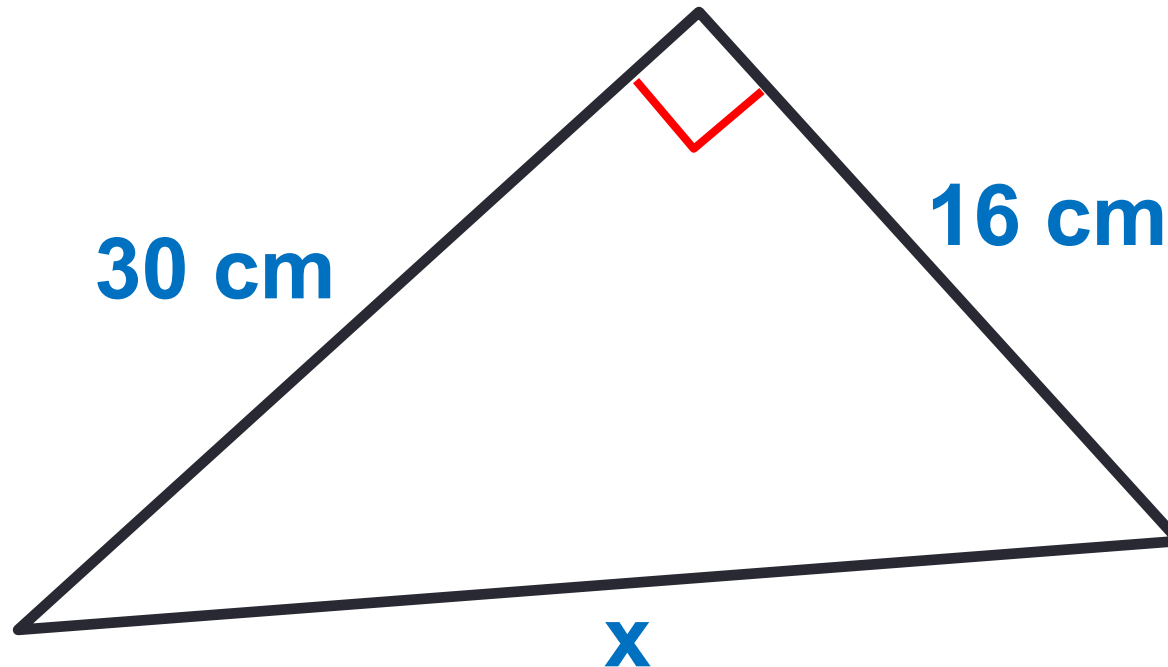
$\downarrow \times 5$

$(15, 20, 25)$

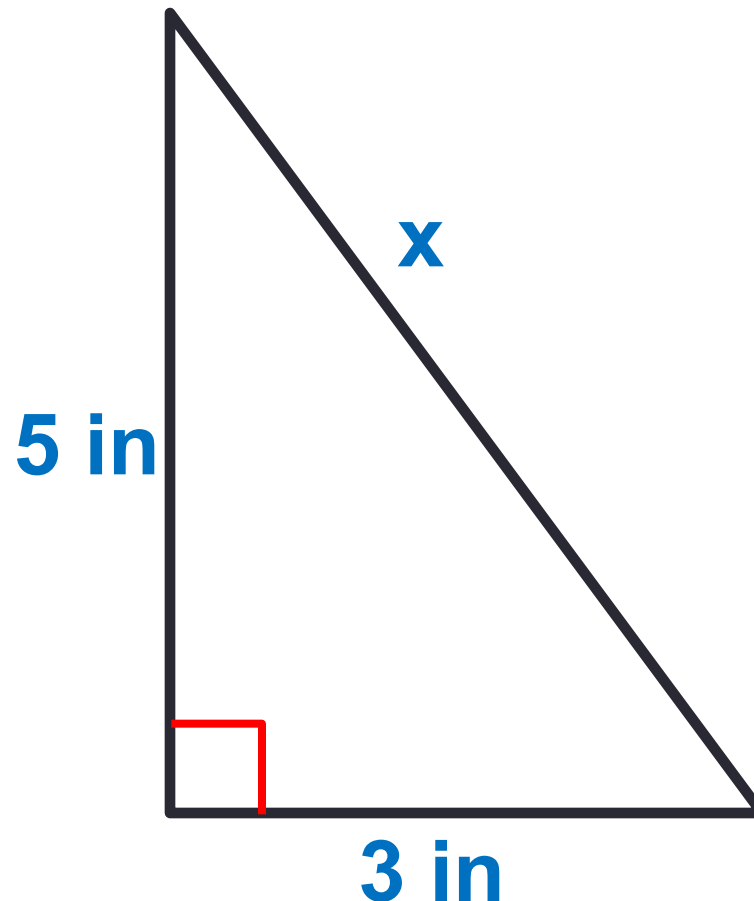
$x = 25 \text{ ft}$

Find the length of the side!

34 cm



Find the length of the side!



TRICK: cannot
use (3,4,5)

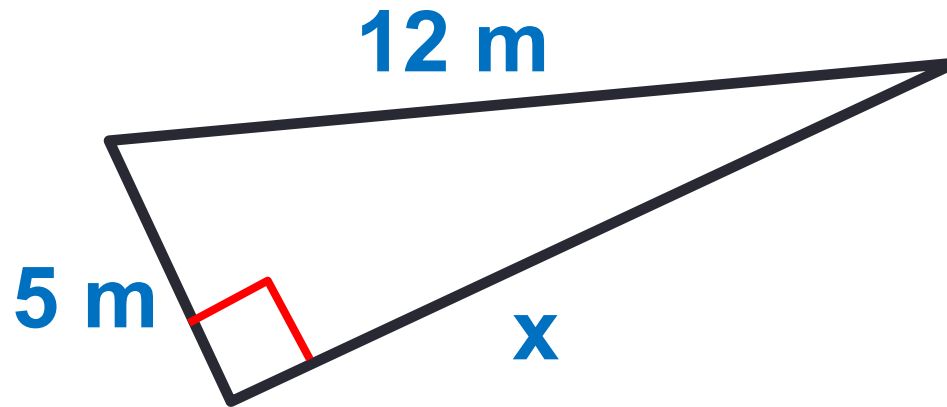
5 must be hypotenuse

$$3^2 + 5^2 = x^2$$

$$34 = x^2$$

$$5.8 \approx x$$

Find the length of the side!

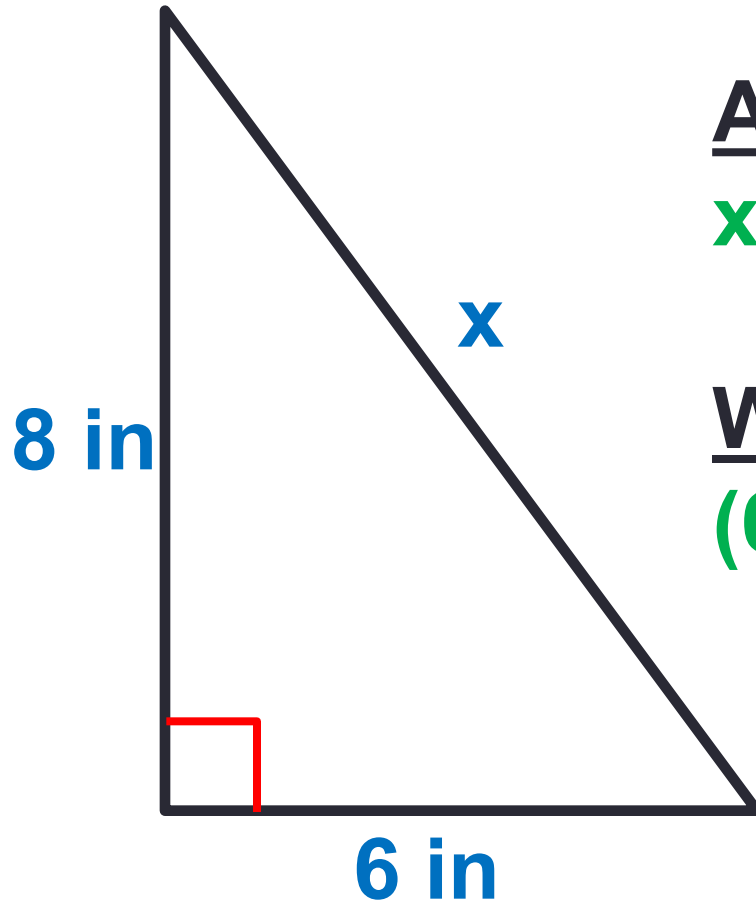


NOT 13

How do I show work?

- If you have some of these Pythagorean Triples memorized, you can use this knowledge in place of working out the math. However you **MUST** say “Pythagorean Triple” or “Pyth. Triple” or something like that so that I know your thought process.

So you could write...



Answer

$$x = 10$$

Work

$(6, 8, 10) = \text{Pyth. Triple}$

QUESTION....

- How many miles is it DIRECTLY from Nashville to Memphis? (As the crow flies)



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- p. 14 Distance on the Coordinate Plane (Guided)**

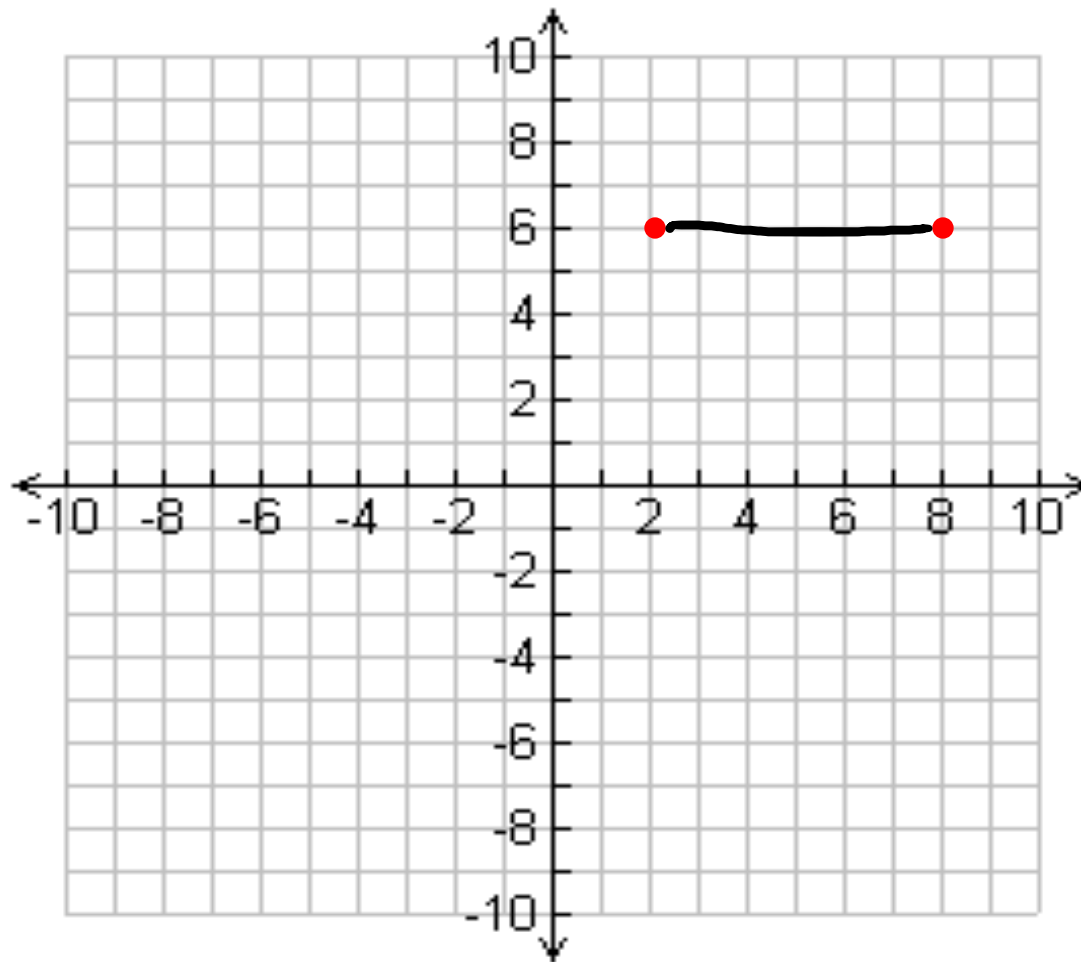
Distance on the Coordinate Plane

13

Objectives:

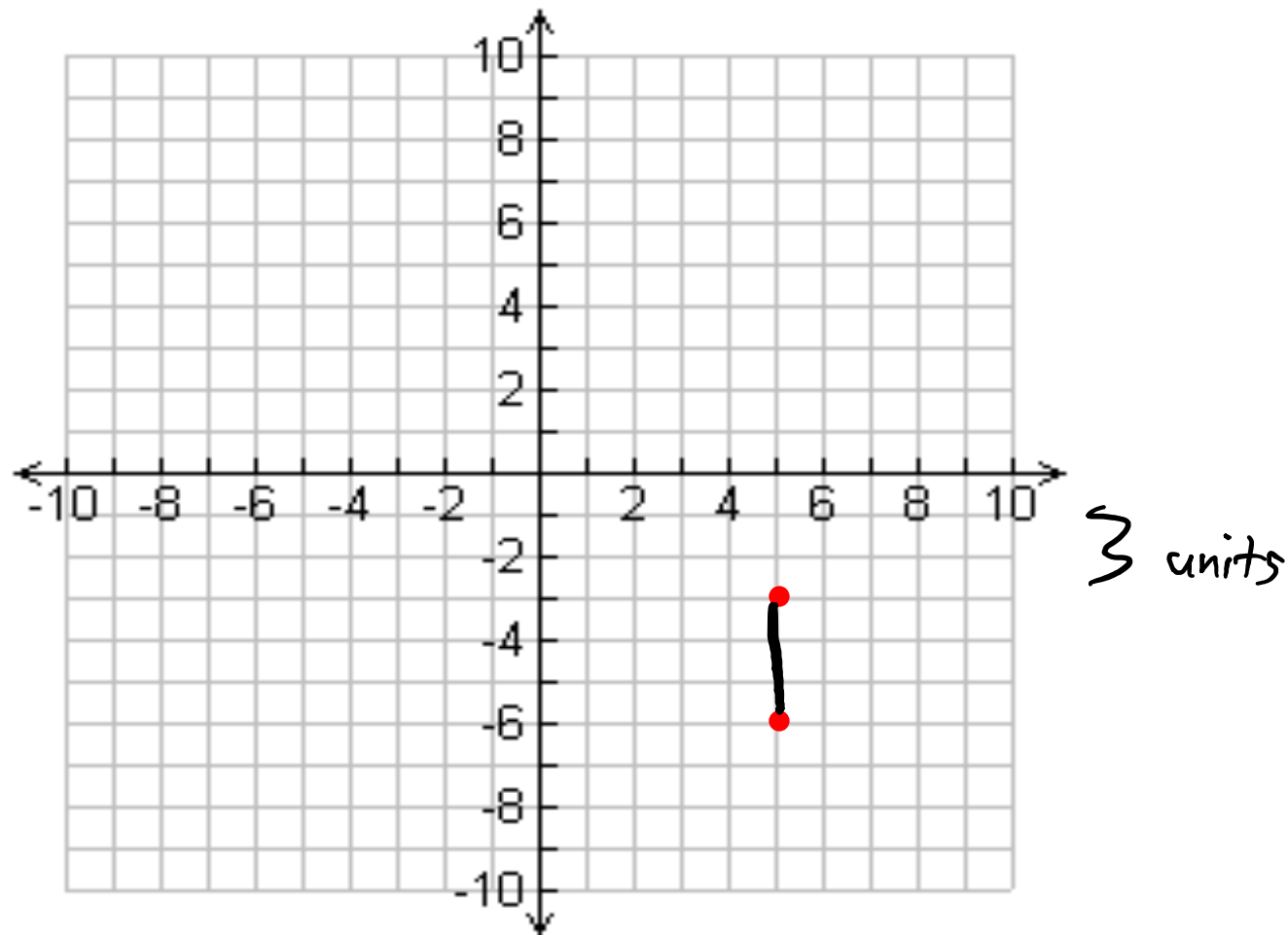
- Find the distance between any two points on the coordinate plane:
 - Horizontally
 - Vertically
 - Diagonally

How far are these points from each other???



6 units

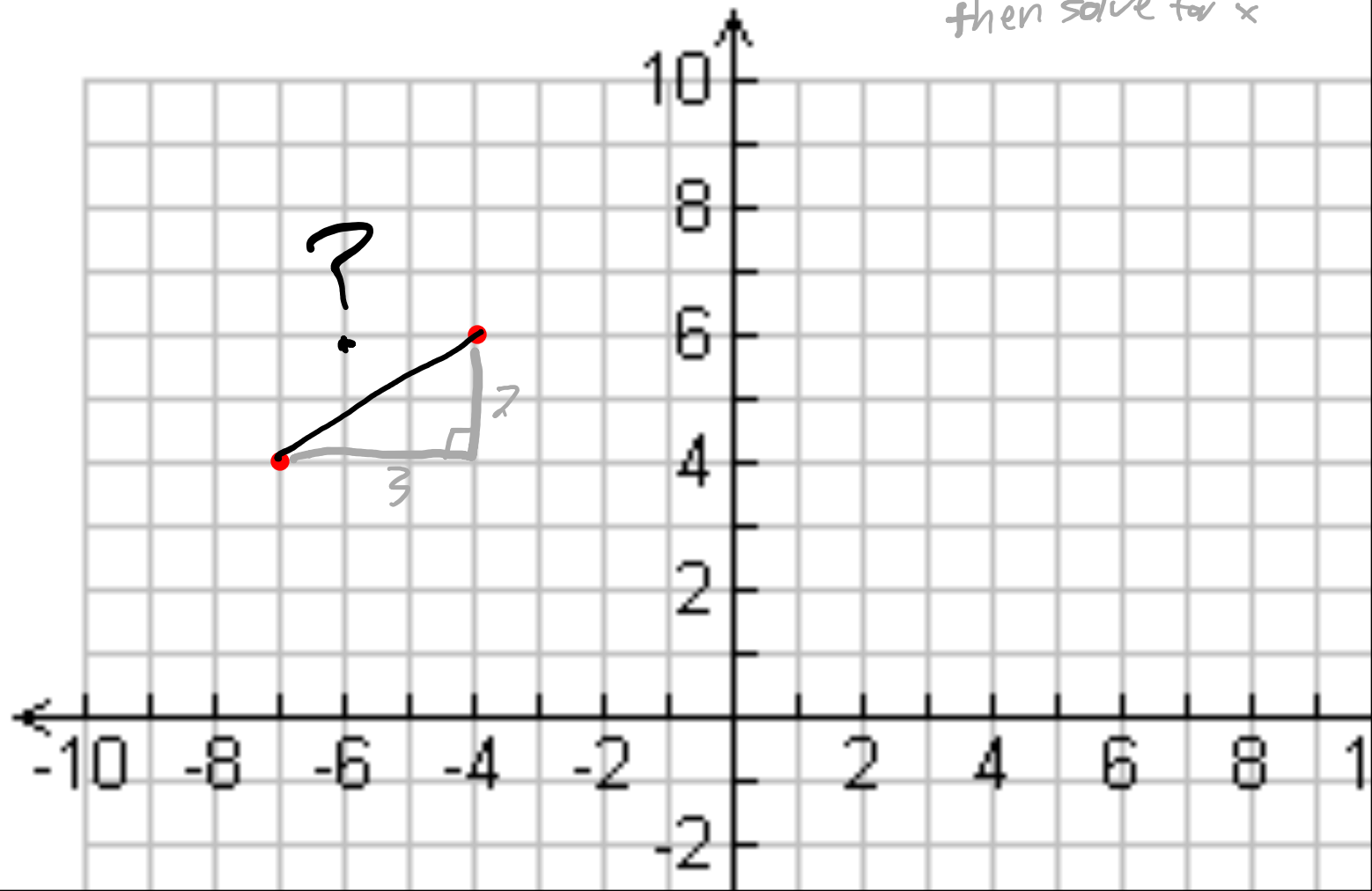
How far are these points from each other???



How far are these points from each other???

$$3^2 + 2^2 = x^2$$

then solve for x



Activity: Estimating Distances

For each one:

- Draw the two points
- **ESTIMATE** the distance, in cm, between the points.
- Measure the actual distance to the nearest tenth of a centimeter.

1. $(1, 23)$ and $(5, 21)$
2. $(9, 17)$ and $(17, 23)$
3. $(1, 15)$ and $(2, 10)$
4. $(11, 11)$ and $(15, 15)$
5. $(2, 7)$ and $(18, 0)$

HW: p.415 (1 – 6, 12)
p. 435 (1 – 4)

- **DUE THURSDAY**