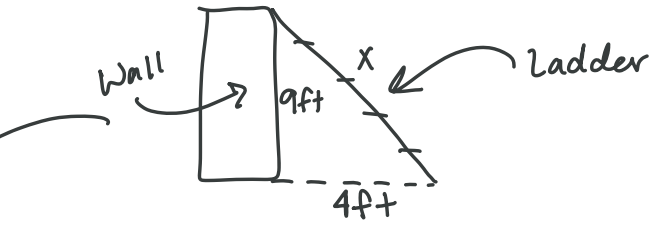
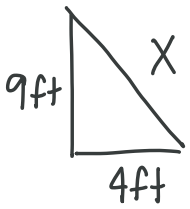
C/D

#8 What is the length of the ladder?



$(\text{Side 1})^2 + (\text{Side 2})^2 = (\text{Hypotenuse})^2$



X is the hypotenuse

9ft - Side #1

4ft - side #2

$(9)^2 + (4)^2 = X^2$

$(9 \cdot 9) + (4 \cdot 4) = x^2$

$81 + 16 = x^2$

$97 = x^2$

$\sqrt{97} = \sqrt{x^2}$

$9.8 = X$

9.8 ft

$[X^2 = X \cdot X]$

$\sqrt{X^2} = X$

$\sqrt{x^2} = X$

$\sqrt{2^2} = 2$

Topics to Review

* Review definitions - hypotenuse
* Squares
* powers/exponents

"9 squared" is the same as "9 raised to the second power"

9^2

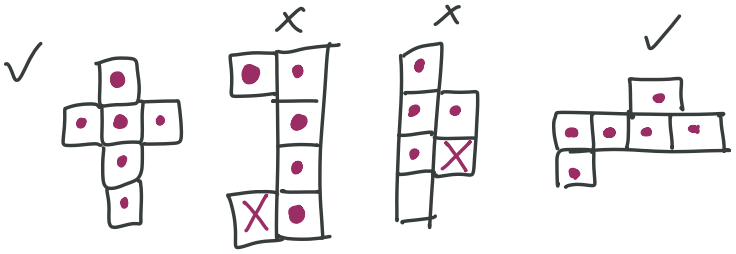
* PEMDAS
* Square root

$\sqrt{4} = 2$

$X^2 = X \cdot X$

$(2^2 = 2 \cdot 2 = 4)$

Q: Which nets fold to make a cube?



* nets that fold to make a shape

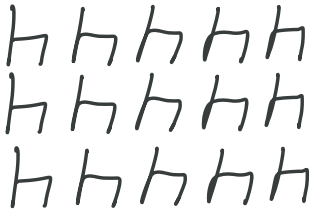
- When folded, are there any sides that overlap or are missing (open) sides? If so, it does not make a cube.

- Requirements: 4 squares down the center, with one square on the left side and one on the right.

A/B

#8

Chairs



Three-fifths of the chairs were donated. How many chairs were donated?

- "Three-fifths" → $\frac{3}{5}$ "3 per 5 Chairs were donated"
- Total # of chairs : 15 chairs
- $\frac{3}{5}$ of the 15 chairs were donated

20% of our bill
0.2 x bill

$\frac{3}{5} \times 15 = \frac{3 \times 15}{5} = \frac{45}{5} = 45 \div 5 = 9$

* Multiplication between whole numbers and fractions

* $\frac{3}{5}$ of 15 = 9

* $\frac{2}{3}$ of 11 = ?

* $\frac{2}{7}$ of 20 = ?

Another way of looking at the problem

Row 1:

Row 2:

Row 3:

C/D

(#10) Jody has 2 part-time jobs. One pays minimum wage and the other pays 25% more than minimum wage. Last week she worked 11 hours at each job. Which expression shows how much she earned last week? Use m for the minimum wage.

A) $11(1+0.25)m$ B) $11m+(1+0.25)m$

C) $11[m+(1+0.25)m]$ D) $11(m+0.25m)$

Hourly pay:

Job #1: m

Job #2: $(m + 0.25m)$

$m(1+0.25)$

Pay per week:

Job #1: $m \times 11 = 11m$

Job #2: $m(1+0.25)11 = 11m(1+0.25)$

Total: $= 11m + 11m(1+0.25)$

$25\% = \frac{25}{100} = 0.25$

* Factor
* Common terms
* Distribution
* $m \times 1 = m$
* $[\ ]$

$= 11[m + (1+0.25)m]$

$11[m + (1+0.25)m] = 11m + 11(1+0.25)m$

$= 11m + 11m(1+0.25)$

c) $11[m + (1+0.25)m]$

$= 11m + 11(1+0.25)m$

The same expression written in different ways