

Solve each equation:

a. $5x + 75 = 75 + 5x$

Infinite Solutions

b. $5x + 75 = -5x + 75$

$x = 0$

c. $5x - 75 = 5x + 75$

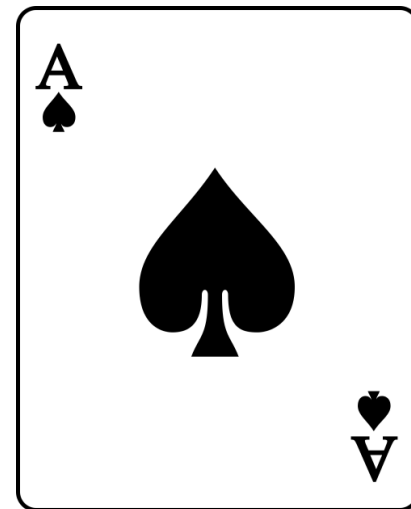
No solution

d. $75 - 5x = 5x - 75$

$x = 15$

e. $5(x - 75) = -5(-x + 75)$

Infinite Solutions



Solve the equation:

$$4 + 2(6x - 10) - 9x = -5(3x + 8 + x - 8) - 4(2x - 2x + 8 - 4)$$

This is just 4x This is just 4

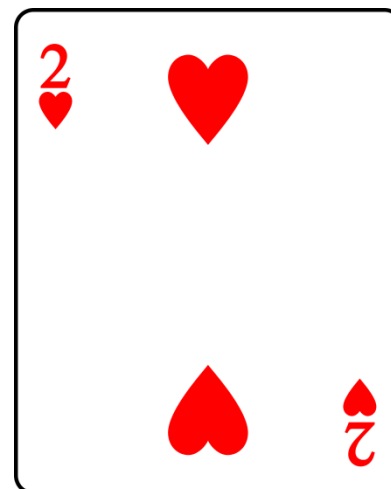
LEFT SIDE SIMPLIFIES TO: $3x - 16$

RIGHT SIDE SIMPLIFIES TO: $-20x - 16$

So you should get:

$$3x - 16 = -20x - 16$$

$$x = 0$$



- In one physical education class, $\frac{5}{8}$ of the students were playing basketball. After 3 more students joined, 18 students were playing basketball.

$$\frac{5}{8}x = 18 + 3x$$

$$18 = \frac{5}{8}x - 3$$

$$\frac{5}{8}(x + 3) = 18$$

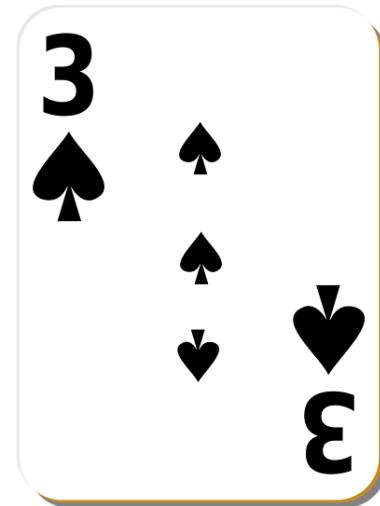
$$\frac{5}{8}x + 3 = 18$$

$$\frac{5}{8}x = 18 - 3$$

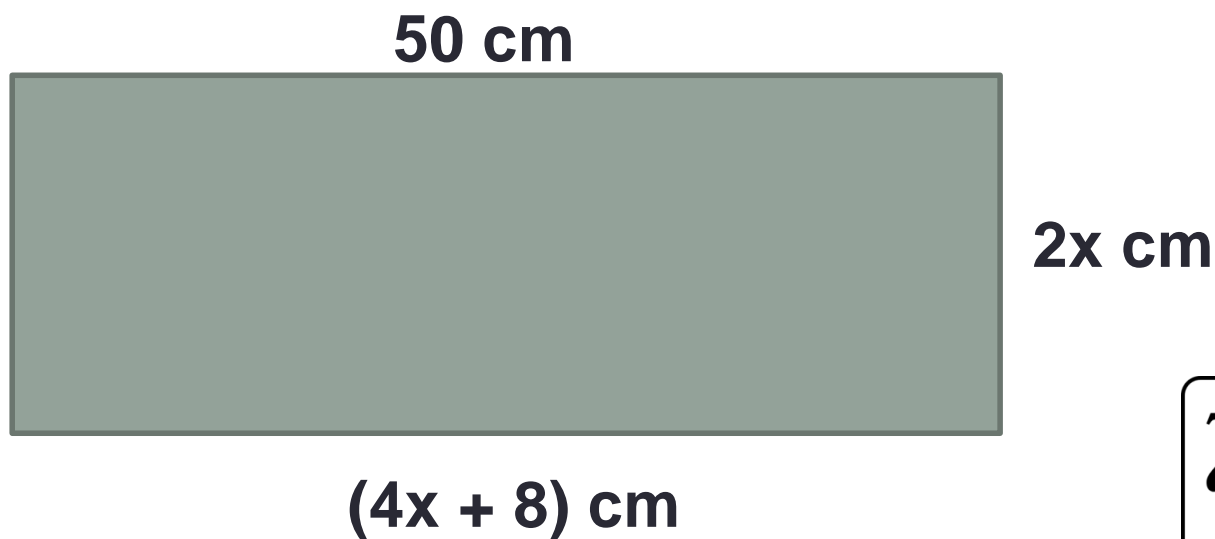
$$\frac{5}{8}x + 3x = 18$$

- Copy all the equations that could represent this situation.
- Find how many students were in the class.
- Check your solution by substituting it into one of the valid equations.

24 students

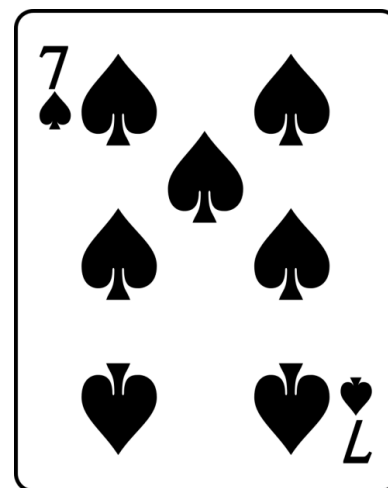


Find the perimeter of this rectangle.



Make top = bottom, $x = 10.5$

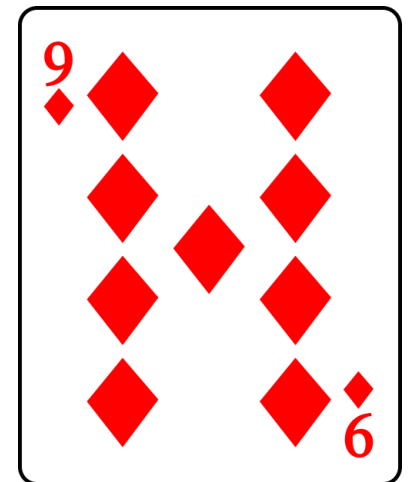
Perimeter = 142 cm



$$x + x + x + x + 3x + (x - 6) = 90$$

Then go from there...

- Doc, Grumpy, Happy, Sleepy, Bashful, Sneezy, and Dopey were all mining for jewels. Doc, Grumpy, Bashful, and Dopey all found the same amount of jewels. Happy was extra energized and found triple the amount that Doc (and the other three) did. Sneezy was too busy sneezing and found 6 fewer jewels than Doc (and the other three) did. Sleepy fell asleep and didn't find any jewels. Altogether, the dwarves found 90 jewels. How many jewels did each dwarf find?

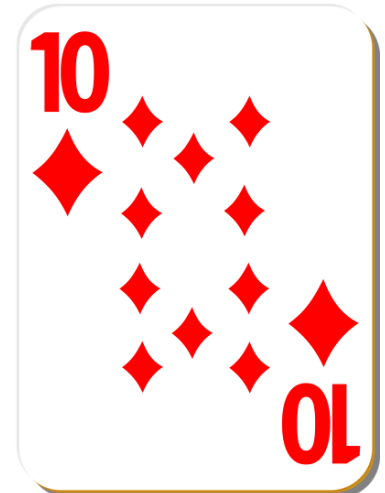
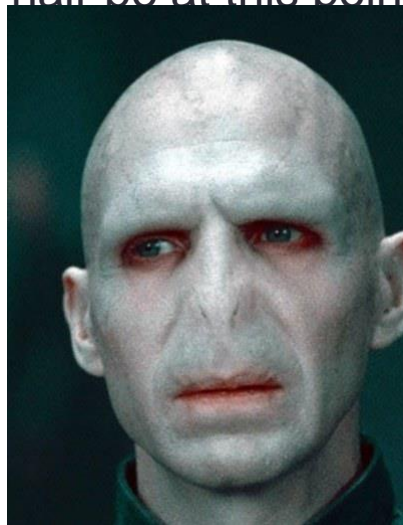


x = # of days

$$90 - 3x = 1.5x$$

20 days; both hair = 30 feet

- Rapunzel's hair was originally 90 feet long, but something strange has happened, and her hair is starting to *shrink*. Her hair is getting 3 feet shorter every day. Meanwhile, Lord Voldemort's head was originally bald, but something equally strange has happened, and his hair is growing 1.5 feet per day.
- Define a variable and write an equation to find out when their hair would be the same length.
- How long will it take for Rapunzel's and Lord Voldemort's hair to be the same length? How long will their hair be at this point?



- Solve both equations. Choose one of the equations and check your answer.

FIRST subtract 4 on both sides, then multiply both sides by 4, then solve from there

$$x = 41$$

$$y = 51$$

$$\frac{4x - 4}{4} + 4 = 44$$

$$\frac{5y - 5}{5} + 5 = 55$$



- From ground level to the tip of the torch, the Statue of Liberty and its pedestal are 92.99 meters tall. The pedestal is 0.89 meter taller than the statue. How tall is the Statue of Liberty? (Just the statue part)



Statue = s

Pedestal = $s + 0.89$

Statue + Pedestal = 92.99

$s + (s + 0.89) = 92.99$

$s = 46.05$ meters



HOMEWORK

- Get out a new piece of paper. Label it “**CARDS REVIEW CORRECTIONS.**”
- I am going to recap the final “scores” of each group and tell you which ones you got incorrect.
- You need to WRITE DOWN the card value of each problem you got incorrect.
- Your homework is to REDO the problems your group missed. If you paid good attention over the last 10 minutes or so, it should be easier!
- The problems will be on my website: lischwe.weebly.com