

Marvelous Meaningful Monthly Math

Sponsored by

Central Area Tech Prep, Mitchell Technical Institute, and Bridges

Law, Public Safety, Corrections and Security December

Career – Correctional Officer

Math Activity

Cheryl Rowley is a correctional officer. She says correctional officers use math to figure out the wages for inmates who are part of work programs. They also use math to keep track of the prison population.

As a senior correctional officer, you're in charge of a local prison facility for a long holiday weekend. Unfortunately for you, a rock concert just outside of town results in more than 100 arrests on Friday night. No judges will hear cases or set bail until Tuesday, meaning the suspects will have to be held in area jails.

The chief of police calls and asks if you can take the prisoners. You have to follow guidelines that prevent you from overcrowding the jail. Your prison was built to hold 5,200 prisoners.

But due to overcrowding across the country, a court ruling allows you to hold 110 percent of that capacity for up to 4 days in so-called emergency situations. You currently have 5,650 prisoners. How many suspects can you take from the chief of police?

Name _____ School _____ Teacher _____

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Solution

A weekend rock concert has area jails overcrowded. You're trying to figure out how many additional suspects you can keep at your facility until bail hearings on Tuesday. First, figure out the emergency capacity of your jail:

110 percent of 5,200

$$5,200 \times 1.10 = 5,720$$

Your emergency capacity is 5,720 and your current population is 5,650. You can subtract to figure out your extra capacity:

$$5,720 - 5,650 = 70$$

You can take 70 prisoners from the chief of police.