Ionico Technical Services

Basic Math

By Stephanie Layfield

Doing Word Problems

- There are always 4 steps to follow with a word problem:
  1. Write down given numbers with units.
  2. Write down the correct formula.
  3. Fill numbers into formula.
  4. Calculate and convert to correct units.
- Conversion (softener capacity) problems only use step 1 and 4.

1. Conversions

- **A Large storage tank has a volume of 25 cu. Ft. How many gallons of water can this tank hold when full?**

1. Conversions

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- Starting Material?

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  - 25 cu. ft.

1. Conversions

- A Large storage tank has a volume of 25 cu. ft. How many gallons of water can this tank hold when full?
- Starting Material?
  - 25 cu. ft.
  - ? Gal.

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- A Large storage tank has a volume of 25 cu. ft. How many gallons of water can this tank hold when full?
- Starting Material?
  - 25 cu. ft.
  - ? Gal.
  - 1 cu. ft. = 7.48 gallons

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- Conversion?

$$\frac{25 \text{ cu. ft.}}{1}$$

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$$\frac{25 \text{ cu. ft.}}{1} \quad \_\_\_\_\_$$

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- Starting Material?
  - 25 cu. ft.
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$$\frac{25 \text{ cu. ft.}}{1} \quad \frac{7.48 \text{ gal.}}{1 \text{ cu. ft.}}$$

1. Conversions

- A Large storage tank has a volume of 25 cu. ft. How many gallons of water can this tank hold when full?
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  - 25 cu. ft.
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  - 25 cu. ft.
  - ? Gal.
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- Conversion?

$$\frac{25\ \cancel{\text{cu. ft.}}}{1} \quad \frac{7.48\ \text{gal.}}{1\ \cancel{\text{cu. ft.}}}$$

1. Conversions

- A Large storage tank has a volume of 25 cu. ft. How many gallons of water can this tank hold when full?
- Starting Material:
  - 25 cu. ft.
  - ? Gal.
  - 1 cu. ft. = 7.48 gallons
- Conversion: $\frac{25 \text{ cu. ft.}}{1} \quad \frac{7.48 \text{ gal.}}{1 \text{ cu. ft.}}$
- = <u>187 Gallons</u>

2. Conversions

- **A water tower that is 15.4 yards tall shows a pressure of how many psi at the bottom?**

2. Conversions

- A water tower that is 15.4 yards tall shows a pressure of how many psi at the bottom?
- Starting Material?
  - 15.4 yards
  - ? Psi

2. Conversions

- A water tower that is 15.4 yards tall shows a pressure of how many psi at the bottom?
- Starting Material?
  - 15.4 yards
  - ? Psi
  - 1 psi = 2.31 ft

2. Conversions

- A water tower that is 15.4 yards tall shows a pressure of how many psi at the bottom?
- Starting Material?
  - 15.4 yards
  - ? Psi
  - 1 psi = 2.31 ft
  - 1 yard = 3 ft.

2. Conversions

- A water tower that is 15.4 yards tall shows a pressure of how many psi at the bottom?
- Starting Material?
  - 15.4 yards
  - ? Psi
  - 1 psi = 2.31 ft
  - 1 yard = 3 ft.
- Conversion? $\frac{15.4 \text{ yards.}}{1}$

2. Conversions

- A water tower that is 15.4 yards tall shows a pressure of how many psi at the bottom?
- Starting Material?
  - 15.4 yards
  - ? Psi
  - 1 psi = 2.31 ft
  - 1 yard = 3 ft.
- Conversion? $\frac{15.4 \text{ yards.}}{1}$ _____

2. Conversions

- A water tower that is 15.4 yards tall shows a pressure of how many psi at the bottom?
- Starting Material?
  - 15.4 yards
  - ? Psi
  - 1 psi = 2.31 ft
  - 1 yard = 3 ft.
- Conversion? $\frac{15.4 \text{ yards.}}{1} \quad \frac{\quad}{\text{yd.}}$

2. Conversions

- A water tower that is 15.4 yards tall shows a pressure of how many psi at the bottom?
- Starting Material?
  - 15.4 yards
  - ? Psi
  - 1 psi = 2.31 ft
  - 1 yard = 3 ft.
- Conversion? $\frac{15.4 \text{ yards.}}{1} \quad \frac{3 \text{ ft.}}{1 \text{ yard}}$

2. Conversions

- A water tower that is 15.4 yards tall shows a pressure of how many psi at the bottom?
- Starting Material?
  - 15.4 yards
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- A water tower that is 15.4 yards tall shows a pressure of how many psi at the bottom?
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$$\frac{15.4 \text{ yards}}{1} \quad \frac{3 \text{ ft.}}{1 \text{ yard}} \quad \frac{\qquad}{\qquad}$$

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- A water tower that is 15.4 yards tall shows a pressure of how many psi at the bottom?
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  - 1 psi = 2.31 ft
  - 1 yard = 3 ft.
- Conversion?

$$\frac{15.4 \text{ yards.}}{1} \quad \frac{3 \text{ ft.}}{1 \text{ yard}} \quad \frac{1 \text{ psi.}}{2.31 \text{ ft}}$$

2. Conversions

- A water tower that is 15.4 yards tall shows a pressure of how many psi at the bottom?
- Starting Material?
  - 15.4 yards
  - ? Psi
  - 1 psi = 2.31 ft
  - 1 yard = 3 ft.
- Conversion?

$$\frac{15.4\ \cancel{\text{yards}}.}{1}\quad\frac{3\ \cancel{\text{ft.}}}{1\ \cancel{\text{yard}}}\quad\frac{1\ \text{psi.}}{2.31\ \cancel{\text{ft}}}$$

2. Conversions

- A water tower that is 15.4 yards tall shows a pressure of how many psi at the bottom?
- Starting Material?
  - 15.4 yards
  - ? Psi
  - 1 psi = 2.31 ft
  - 1 yard = 3 ft.
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$$\frac{15.4 \text{ yards.}}{1} \quad \frac{3 \text{ ft.}}{1 \text{yard}} \quad \frac{1 \text{ psi.}}{2.31 \text{ ft}}$$

- = 20 psi.

3. Conversions

- **A residential water softener holds 1 cubic foot of resin with a hardness removal capacity of 30,000 grains per cubic foot. The water being treated contains 15 gpg total hardness. The household uses 250 gallons per day. How many days can this softener run before total exhaustion?**

3. Conversions

Per ➔ =1

- **A residential water softener holds 1 cubic foot of resin with a hardness removal capacity of 30,000 grains per cubic foot. The water being treated contains 15 gpg total hardness. The household uses 250 gallons per day. How many days can this softener run before total exhaustion?**

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- **A residential water softener holds 1 cubic foot of resin with a hardness removal capacity of 30,000 grains per cubic foot. The water being treated contains 15 gpg total hardness. The household uses 250 gallons per day. How many days can this softener run before total exhaustion?**
- **Starting Material?**
  - **1 cu. ft. resin** **30,000 grains = 1 cu. ft.** **? Days**
  - **15 grains = 1 gallon** **250 gallons = 1 day**

3. Conversions

- A residential water softener holds 1 cubic foot of resin with a hardness removal capacity of 30,000 grains per cubic foot. The water being treated contains 15 gpg total hardness. The household uses 250 gallons per day. How many days can this softener run before total exhaustion?
- Starting Material?
  - 1 cu. ft. resin 30,000 grains = 1 cu. ft. ? Days
  - 15 grains = 1 gallon 250 gallons = 1 day
- Conversion?

$$\frac{1 \text{ cu. ft.}}{1}$$

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- Starting Material?
  - 1 cu. ft. resin 30,000 grains = 1 cu. ft. ? Days
  - 15 grains = 1 gallon 250 gallons = 1 day
- Conversion?

$$\frac{1 \text{ cu. ft.}}{1} \quad \frac{30{,}000 \text{ grains}}{1 \text{ cu. ft.}}$$

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- Starting Material?
  - 1 cu. ft. resin 30,000 grains = 1 cu. ft. ? Days
  - 15 grains = 1 gallon 250 gallons = 1 day
- Conversion?

$$\frac{1 \text{ cu. ft.}}{1} \quad \frac{30{,}000 \text{ grains}}{1 \text{ cu. ft.}} \quad \frac{1 \text{ gallon}}{15 \text{ grains}}$$

3. Conversions

- A residential water softener holds 1 cubic foot of resin with a hardness removal capacity of 30,000 grains per cubic foot. The water being treated contains 15 gpg total hardness. The household uses 250 gallons per day. How many days can this softener run before total exhaustion?
- Starting Material?
  - 1 cu. ft. resin 30,000 grains = 1 cu. ft. ? Days
  - 15 grains = 1 gallon 250 gallons = 1 day
- Conversion?

$$\frac{1 \text{ cu. ft.}}{1} \quad \frac{30{,}000 \text{ grains}}{1 \text{ cu. ft.}} \quad \frac{1 \text{ gallon}}{15 \text{ grains}} \quad \frac{1 \text{ day}}{250 \text{ gallons}}$$

3. Conversions

- A residential water softener holds 1 cubic foot of resin with a hardness removal capacity of 30,000 grains per cubic foot. The water being treated contains 15 gpg total hardness. The household uses 250 gallons per day. How many days can this softener run before total exhaustion?
- Starting Material?
  - 1 cu. ft. resin 30,000 grains = 1 cu. ft. ? Days
  - 15 grains = 1 gallon 250 gallons = 1 day
- Conversion?

$$\frac{1 \text{ cu. ft.}}{1} \quad \frac{30{,}000 \text{ grains}}{1 \text{ cu. ft.}} \quad \frac{1 \text{ gallon}}{15 \text{ grains}} \quad \frac{1 \text{ day}}{250 \text{ gallons}}$$

- = 8 days

4. Conversions – Your Turn!

- **A commercial softener holds 50 cubic feet of resin with a hardness removal capacity of 30,000 grains per cubic foot. The water being treated contains 25 gpg total hardness. How many gallons of water can be treated before the exchange capacity is exhausted?**

4. Conversions

- A commercial softener holds 50 cubic feet of resin with a hardness removal capacity of 30,000 grains per cubic foot. The water being treated contains 25 gpg total hardness. How many gallons of water can be treated before the exchange capacity is exhausted?
- Starting Material?
  - 50 cu. ft. resin
  - 25 grains = 1 gallon

30,000 grains = 1 cu. ft.

? gallons

4. Conversions

- A commercial softener holds 50 cubic feet of resin with a hardness removal capacity of 30,000 grains per cubic foot. The water being treated contains 25 gpg total hardness. How many gallons of water can be treated before the exchange capacity is exhausted?
- Starting Material?
  - 50 cu. ft. resin
  - 25 grains = 1 gallon
  - 30,000 grains = 1 cu. ft.
  - ? gallons
- Conversion?

$$\frac{50 \text{ cu. ft}}{1} \quad \frac{30{,}000 \text{ grains}}{1 \text{ cu. ft.}} \quad \frac{1 \text{ gallon}}{25 \text{ grains}}$$

4. Conversions

- A commercial softener holds 50 cubic feet of resin with a hardness removal capacity of 30,000 grains per cubic foot. The water being treated contains 25 gpg total hardness. How many gallons of water can be treated before the exchange capacity is exhausted?
- Starting Material?
  - 50 cu. ft. resin
  - 25 grains = 1 gallon

30,000 grains = 1 cu. ft.

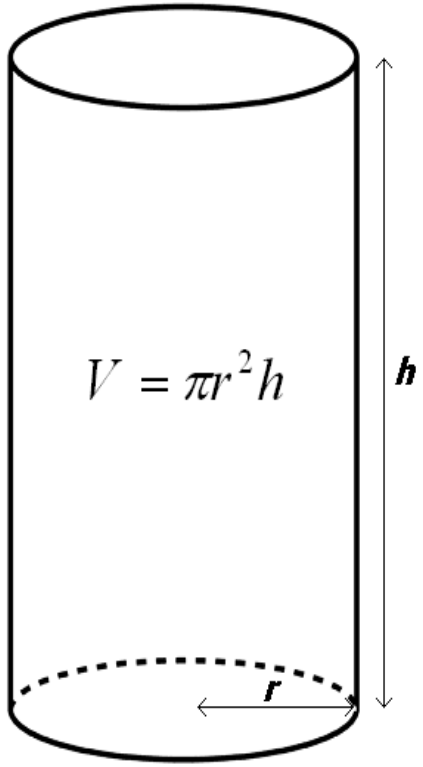
- Conversion?

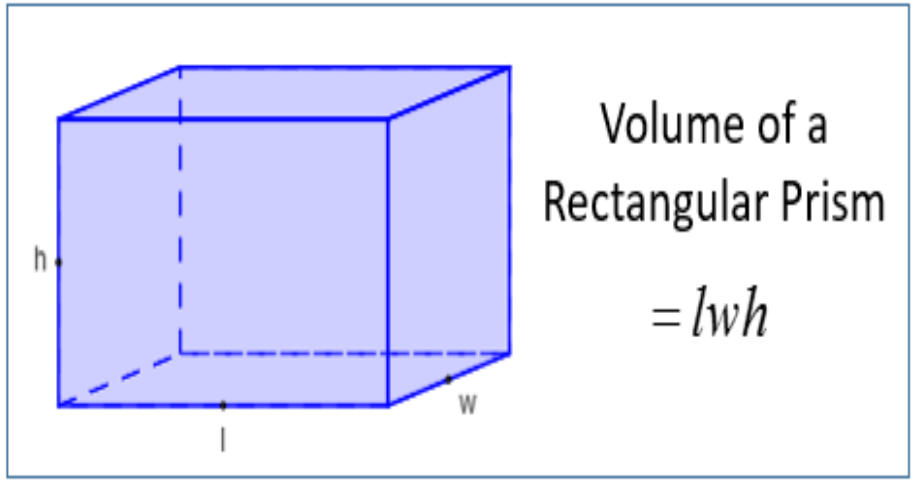
$$\frac{50 \text{ cu. ft}}{1} \quad \frac{30{,}000 \text{ grains}}{1 \text{ cu. ft.}} \quad \frac{1 \text{ gallon}}{25 \text{ grains}}$$

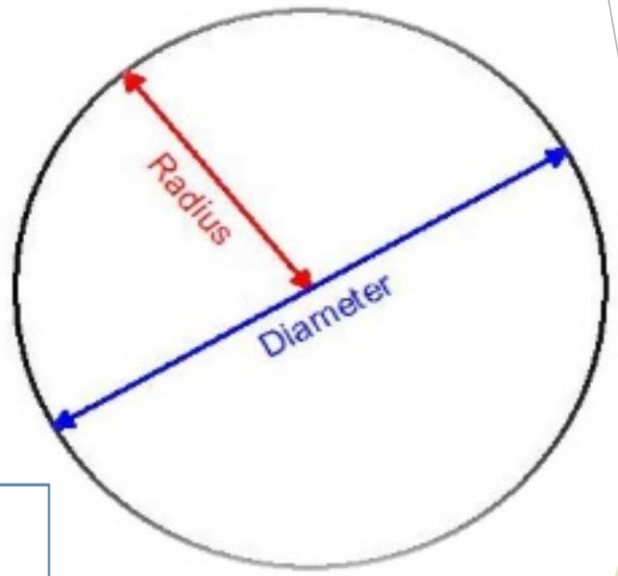
= 60,000 gallons

Volume

- A pipe is just a really long cylinder.







1. Rectangular Tank

- **A rectangular tank is 2 ft tall, 2 ft wide, and 4 ft long. How many gallons of water can this tank hold when full?**

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- **Step 1**

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- **A rectangular tank is 2 ft tall, 2 ft wide, and 4 ft long. How many gallons of water can this tank hold when full?**
- **Step 1**
  - **Height = 2 ft**
  - **Width = 2 ft**
  - **Length = 4 ft**

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- **Step 1**
  - **Height = 2 ft**
  - **Width = 2 ft**
  - **Length = 4 ft**
  - **? Gal.**

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  - Width = 2 ft
  - Length = 4 ft
  - ? Gal.
- Step 2

1. Rectangular Tank

- A rectangular tank is 2 ft tall, 2 ft wide, and 4 ft long. How many gallons of water can this tank hold when full?
- Step 1
  - Height = 2 ft
  - Width = 2 ft
  - Length = 4 ft
  - ? Gal.
- Step 2
  - Volume = Length x Width x Height

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  - Height = 2 ft
  - Width = 2 ft
  - Length = 4 ft
  - ? Gal.
- Step 2
  - Volume = Length x Width x Height
- Step 3
  - ? = 4 ft. x 2 ft. x 2 ft.

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- Step 1
  - Height = 2 ft
  - Width = 2 ft
  - Length = 4 ft
  - ? Gal.
- Step 2
  - V = Length x Width x Height
- Step 3
  - ? = 4 ft. x 2 ft. x 2 ft.
- Step 4

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- Step 1
  - Height = 2 ft
  - Width = 2 ft
  - Length = 4 ft
  - ? Gal.
- Step 2
  - V = Length x Width x Height
- Step 3
  - V = 4 ft. x 2 ft. x 2 ft.
- Step 4
  - ? = 16

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  - Width = 2 ft
  - Length = 4 ft
  - ? Gal.
- Step 2
  - V = Length x Width x Height
- Step 3
  - V = 4 ft. x 2 ft. x 2 ft.
- Step 4
  - ? = 16

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  - Width = 2 ft
  - Length = 4 ft
  - ? Gal.
- Step 2
  - V = Length x Width x Height
- Step 3
  - V = 4 ft. x 2 ft. x 2 ft.
- Step 4
  - ? = 16 cu. ft

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  - Width = 2 ft
  - Length = 4 ft
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- Step 2
  - V = Length x Width x Height
- Step 3
  - V = 4 ft. x 2 ft. x 2 ft.
- Step 4
  - ? = 16 cu. ft.

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- A rectangular tank is 2 ft tall, 2 ft wide, and 4 ft long. How many gallons of water can this tank hold when full?
- Step 1
  - Height = 2 ft
  - Width = 2 ft
  - Length = 4 ft
  - ? Gal.
- Step 2
  - V = Length x Width x Height
- Step 3
  - V = 4 ft. x 2 ft. x 2 ft.
- Step 4
  - $? = \frac{16 \text{ cu. ft.}}{1} \quad \frac{7.48 \text{ gal}}{1 \text{ cu. ft.}}$

1. Rectangular Tank

- A rectangular tank is 2 ft tall, 2 ft wide, and 4 ft long. How many gallons of water can this tank hold when full?
- Step 1
  - Height = 2 ft
  - Width = 2 ft
  - Length = 4 ft
  - ? Gal.
- Step 2
  - V = Length x Width x Height
- Step 3
  - V = 4 ft. x 2 ft. x 2 ft.
- Step 4
  - $? = \frac{16 \text{ cu. ft.}}{1} \quad \frac{7.48 \text{ gal}}{1 \text{ cu. ft.}}$ $= 120 \text{ Gallons}$

2. Rectangular Tank – Your Turn!

- **A rectangular tank is 96 in. tall, 36 in. wide, and 48 in. long. How many gallons of water can this tank hold when full?**

2. Rectangular Tank – Your Turn!

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- **Step 1**

2. Rectangular Tank – Your Turn!

- **A rectangular tank is 96 in. tall, 36 in. wide, and 48 in. long. How many gallons of water can this tank hold when full?**
- **Step 1**
  - **Height = 96 in**
  - **Width = 36 in**
  - **Length = 48 in**

2. Rectangular Tank – Your Turn!

- **A rectangular tank is 96 in. tall, 36 in. wide, and 48 in. long. How many gallons of water can this tank hold when full?**
- **Step 1**
  - **Height = 96 in = 8 ft**
  - **Width = 36 in = 3 ft**
  - **Length = 48 in = 4 ft**

2. Rectangular Tank – Your Turn!

- A rectangular tank is 96 in. tall, 36 in. wide, and 48 in. long. How many gallons of water can this tank hold when full?
- Step 1
  - Height = 96 in = 8 ft
  - Width = 36 in = 3 ft
  - Length = 48 in = 4 ft
  - ? Gallons

2. Rectangular Tank – Your Turn!

- A rectangular tank is 96 in. tall, 36 in. wide, and 48 in. long. How many gallons of water can this tank hold when full?
- Step 1
  - Height = 96 in = 8 ft
  - Width = 36 in = 3 ft
  - Length = 48 in = 4 ft
  - ? Gallons
- Step 2

2. Rectangular Tank – Your Turn!

- A rectangular tank is 96 in. tall, 36 in. wide, and 48 in. long. How many gallons of water can this tank hold when full?
- Step 1
  - Height = 96 in = 8 ft
  - Width = 36 in = 3 ft
  - Length = 48 in = 4 ft
  - ? Gallons
- Step 2
  - Volume = Length x Width x Height

2. Rectangular Tank – Your Turn!

- A rectangular tank is 96 in. tall, 36 in. wide, and 48 in. long. How many gallons of water can this tank hold when full?
- Step 1
  - Height = 96 in = 8 ft
  - Width = 36 in = 3 ft
  - Length = 48 in = 4 ft
  - ? Gallons
- Step 2
  - Volume = Length x Width x Height
- Step 3

2. Rectangular Tank – Your Turn!

- A rectangular tank is 96 in. tall, 36 in. wide, and 48 in. long. How many gallons of water can this tank hold when full?
- Step 1
  - Height = 96 in = 8 ft
  - Width = 36 in = 3 ft
  - Length = 48 in = 4 ft
  - ? Gallons
- Step 2
  - Volume = Length x Width x Height
- Step 3
  - ? = 4 ft. x 3 ft. x 8 ft.

2. Rectangular Tank – Your Turn!

- A rectangular tank is 96 in. tall, 36 in. wide, and 48 in. long. How many gallons of water can this tank hold when full?
- Step 1
  - Height = 96 in = 8 ft
  - Width = 36 in = 3 ft
  - Length = 48 in = 4 ft
  - ? Gallons
- Step 2
  - Volume = Length x Width x Height
- Step 3
  - V = 4 ft. x 3 ft. x 8 ft.
- Step 4
  - V = 96

2. Rectangular Tank – Your Turn!

- A rectangular tank is 96 in. tall, 36 in. wide, and 48 in. long. How many gallons of water can this tank hold when full?
- Step 1
  - Height = 96 in = 8 ft
  - Width = 36 in = 3 ft
  - Length = 48 in = 4 ft
  - ? Gallons
- Step 2
  - Volume = Length x Width x Height
- Step 3
  - V = 4 ft. x 3 ft. x 8 ft.
- Step 4
  - V = 96 cu. ft.

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- A rectangular tank is 96 in. tall, 36 in. wide, and 48 in. long. How many gallons of water can this tank hold when full?
- Step 1
  - Height = 96 in = 8 ft
  - Width = 36 in = 3 ft
  - Length = 48 in = 4 ft
  - ? Gallons
- Step 2
  - Volume = Length x Width x Height
- Step 3
  - V = 4 ft. x 3 ft. x 8 ft.
- Step 4
  - V = 96 cu. ft. x 7.48 =

2. Rectangular Tank – Your Turn!

- A rectangular tank is 96 in. tall, 36 in. wide, and 48 in. long. How many gallons of water can this tank hold when full?
- Step 1
  - Height = 96 in = 8 ft
  - Width = 36 in = 3 ft
  - Length = 48 in = 4 ft
  - ? Gallons
- Step 2
  - Volume = Length x Width x Height
- Step 3
  - V = 4 ft. x 3 ft. x 8 ft.
- Step 4
  - V = 96 cu. ft. x 7.48 = **718 gallons.**

3. Round Tank

- **A cylindrical tank is 2 ft. in diameter and 4 ft. to the overflow. How many gallons of water can this tank hold when full?**

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- A cylindrical tank is 2 ft. in diameter and 4 ft. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 2 ft
  - Height = 4 ft
  - ? Gal

3. Round Tank

- A cylindrical tank is 2 ft. in diameter and 4 ft. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 2 ft
  - Height = 4 ft
  - ? Gal
- Step 2

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- A cylindrical tank is 2 ft. in diameter and 4 ft. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 2 ft
  - Height = 4 ft
  - ? Gal
- Step 2
  - Volume = πr^2 x Height

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  - Diameter = 2 ft
  - Height = 4 ft
  - ? Gal
- Step 2
  - Volume = πr^2 x Height

3. Round Tank

- A cylindrical tank is 2 ft. in diameter and 4 ft. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 2 ft Radius = 1 ft
  - Height = 4 ft
  - ? Gal
- Step 2
  - Volume = $\pi r^2 \times$ Height

3. Round Tank

$r^2 \rightarrow r \times r$

- A cylindrical tank is 2 ft. in diameter and 4 ft. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 2 ft Radius = 1 ft
  - Height = 4 ft
  - ? Gal
- Step 2
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- Step 1
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  - Height = 4 ft
  - ? Gal
- Step 2
  - Volume = πr^2 x Height
- Step 3

3. Round Tank

- A cylindrical tank is 2 ft. in diameter and 4 ft. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 2 ft Radius = 1 ft
  - Height = 4 ft
  - ? Gal
- Step 2
  - Volume = πr^2 x Height
- Step 3
  - ? = 3.14 x 1 ft. x 1 ft. x 4 ft

3. Round Tank

- A cylindrical tank is 2 ft. in diameter and 4 ft. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 2 ft Radius = 1 ft
  - Height = 4 ft
  - ? Gal
- Step 2
  - Volume = πr^2 x Height
- Step 3
  - ? = 3.14 x 1 ft. x 1 ft. x 4 ft
- Step 4

3. Round Tank

- A cylindrical tank is 2 ft. in diameter and 4 ft. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 2 ft Radius = 1 ft
  - Height = 4 ft
  - ? Gal
- Step 2
  - Volume = πr^2 x Height
- Step 3
  - ? = 3.14 x 1 ft. x 1 ft. x 4 ft
- Step 4
  - ? = 12.56

3. Round Tank

- A cylindrical tank is 2 ft. in diameter and 4 ft. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 2 ft Radius = 1 ft
  - Height = 4 ft
  - ? Gal
- Step 2
  - Volume = πr^2 x Height
- Step 3
  - ? = 3.14 x 1 ft. x 1 ft. x 4 ft
- Step 4
  - ? = 12.56 cu. ft.

3. Round Tank

- A cylindrical tank is 2 ft. in diameter and 4 ft. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 2 ft Radius = 1 ft
  - Height = 4 ft
  - ? Gal
- Step 2
  - Volume = πr^2 x Height
- Step 3
  - ? = 3.14 x 1 ft. x 1 ft. x 4 ft
- Step 4
  - ? = 12.56 cu. ft. x 7.48

3. Round Tank

- A cylindrical tank is 2 ft. in diameter and 4 ft. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 2 ft Radius = 1 ft
  - Height = 4 ft
  - ? Gal
- Step 2
  - Volume = πr^2 x Height
- Step 3
  - ? = 3.14 x 1 ft. x 1 ft. x 4 ft
- Step 4
  - ? = 12.56 cu. ft. x 7.48 = <u>93.9 gallons</u>

4. Round Tank – Your Turn!

- **A cylindrical tank is 36 in. in diameter and 72 in. to the overflow. How many gallons of water can this tank hold when full?**

4. Round Tank – Your Turn!

- **A cylindrical tank is 36 in. in diameter and 72 in. to the overflow. How many gallons of water can this tank hold when full?**
- **Step 1**

4. Round Tank – Your Turn!

- A cylindrical tank is 36 in. in diameter and 72 in. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 36 in.
  - Height = 72 in.
  - ? Gallons

4. Round Tank – Your Turn!

- A cylindrical tank is 36 in. in diameter and 72 in. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 36 in. = 3 ft.
  - Height = 72 in. = 6 ft.
  - ? Gallons

4. Round Tank – Your Turn!

- A cylindrical tank is 36 in. in diameter and 72 in. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 36 in. = 3 ft.
  - Height = 72 in. = 6 ft.
  - ? Gallons
- Step 2

4. Round Tank – Your Turn!

- A cylindrical tank is 36 in. in diameter and 72 in. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 36 in. = 3 ft.
  - Height = 72 in. = 6 ft.
  - ? Gallons
- Step 2
  - Volume = πr^2 x Height

4. Round Tank – Your Turn!

- A cylindrical tank is 36 in. in diameter and 72 in. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 36 in. = 3 ft. Radius = 1.5 ft
  - Height = 72 in. = 6 ft.
  - ? Gallons
- Step 2
  - Volume = πr^2 x Height

4. Round Tank – Your Turn!

- A cylindrical tank is 36 in. in diameter and 72 in. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 36 in. = 3 ft. Radius = 1.5 ft
  - Height = 72 in. = 6 ft.
  - ? Gallons
- Step 2
  - Volume = πr^2 x Height
- Step 3

4. Round Tank – Your Turn!

- A cylindrical tank is 36 in. in diameter and 72 in. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 36 in. = 3 ft. Radius = 1.5 ft
  - Height = 72 in. = 6 ft.
  - ? Gallons
- Step 2
  - Volume = πr^2 x Height
- Step 3
  - ? = 3.14 x 1.5 ft. x 1.5 ft. x 6 ft

4. Round Tank – Your Turn!

- A cylindrical tank is 36 in. in diameter and 72 in. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 36 in. = 3 ft. Radius = 1.5 ft
  - Height = 72 in. = 6 ft.
  - ? Gallons
- Step 2
  - Volume = πr^2 x Height
- Step 3
  - ? = 3.14 x 1.5 ft. x 1.5 ft. x 6 ft
- Step 4

4. Round Tank – Your Turn!

- A cylindrical tank is 36 in. in diameter and 72 in. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 36 in. = 3 ft. Radius = 1.5 ft
  - Height = 72 in. = 6 ft.
  - ? Gallons
- Step 2
  - Volume = πr^2 x Height
- Step 3
  - ? = 3.14 x 1.5 ft. x 1.5 ft. x 6 ft
- Step 4
  - ? = 42.4 cu. ft.

4. Round Tank – Your Turn!

- A cylindrical tank is 36 in. in diameter and 72 in. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 36 in. = 3 ft. Radius = 1.5 ft
  - Height = 72 in. = 6 ft.
  - ? Gallons
- Step 2
  - Volume = πr^2 x Height
- Step 3
  - ? = 3.14 x 1.5 ft. x 1.5 ft. x 6 ft
- Step 4
  - ? = 42.4 cu. ft. x 7.48

4. Round Tank – Your Turn!

- A cylindrical tank is 36 in. in diameter and 72 in. to the overflow. How many gallons of water can this tank hold when full?
- Step 1
  - Diameter = 36 in. = 3 ft. Radius = 1.5 ft
  - Height = 72 in. = 6 ft.
  - ? Gallons
- Step 2
  - Volume = πr^2 x Height
- Step 3
  - V = 3.14 x 1.5 ft. x 1.5 ft. x 6 ft
- Step 4
  - V = 42.4 cu. ft. x 7.48 = **317 gallons.**

5. Pipe – Your Turn!

- **A 6 in water main is 50 ft. long. How many gallons of water can this pipe hold when full?**

5. Pipe – Your Turn!

- A 6 in water main is 50 ft. long. How many gallons of water can this pipe hold when full?
- Step 1
  - Diameter = 6 in. = 0.5 ft. Radius = 0.25 ft.
  - Length = 50 ft.

5. Pipe – Your Turn!

- A 6 in water main is 50 ft. long. How many gallons of water can this pipe hold when full?
- Step 1
  - Diameter = 6 in. = 0.5 ft. Radius = 0.25 ft.
  - Length = 50 ft.
- Step 2
  - Volume = πr^2 x Length

5. Pipe – Your Turn!

- A 6 in water main is 50 ft. long. How many gallons of water can this pipe hold when full?
- Step 1
  - Diameter = 6 in. = 0.5 ft. Radius = 0.25 ft.
  - Length = 50 ft.
- Step 2
  - Volume = πr^2 x Length
- Step 3
  - ? = 3.14 x 0.25 ft. x 0.25 ft. x 50 ft

5. Pipe – Your Turn!

- A 6 in water main is 50 ft. long. How many gallons of water can this pipe hold when full?
- Step 1
  - Diameter = 6 in. = 0.5 ft. Radius = 0.25 ft.
  - Length = 50 ft.
- Step 2
  - Volume = πr^2 x Length
- Step 3
  - ? = 3.14 x 0.25 ft. x 0.25 ft. x 50 ft
- Step 4
  - ? = 9.8 cu. ft. x 7,48 = <u>73.4 gallons.</u>

Disinfection

- 1,250,000 gallons = 1.25 MG
  - Move decimal 6 places to the left
- 15% chlorine = 0.15
  - Always change a percent to a decimal by moving decimal 2 places to the left
- ALWAYS follow the 4-step process
  - Determining the correct formula is the hardest.
    - Step 1 will help.

1. Disinfection

- **Determine the chlorine dosage needed to achieve a 0.7 mg/l residual in a system with a demand of 9.3 mg/l.**

1. Disinfection

- **Determine the chlorine dosage needed to achieve a 0.7 mg/l residual in a system with a demand of 9.3 mg/l.**
- **Step 1**

1. Disinfection

- **Determine the chlorine dosage needed to achieve a 0.7 mg/l residual in a system with a demand of 9.3 mg/l.**
- **Step 1**
  - **Residual = 0.7 mg/l**
  - **Demand = 9.3 mg/l**
  - **Dosage = ?**

1. Disinfection

- **Determine the chlorine dosage needed to achieve a 0.7 mg/l residual in a system with a demand of 9.3 mg/l.**
- **Step 1**
  - **Residual = 0.7 mg/l**
  - **Demand = 9.3 mg/l**
  - **Dosage = ?**
- **Step 2**

1. Disinfection

- Determine the chlorine dosage needed to achieve a 0.7 mg/l residual in a system with a demand of 9.3 mg/l.
- Step 1
  - Residual = 0.7 mg/l
  - Demand = 9.3 mg/l
  - Dosage = ?
- Step 2
  - Dosage = Demand + Residual

1. Disinfection

- **Determine the chlorine dosage needed to achieve a 0.7 mg/l residual in a system with a demand of 9.3 mg/l.**
- **Step 1**
  - **Residual = 0.7 mg/l**
  - **Demand = 9.3 mg/l**
  - **Dosage = ?**
- **Step 2**
  - **Dosage = Demand + Residual**
- **Step 3**

1. Disinfection

- Determine the chlorine dosage needed to achieve a 0.7 mg/l residual in a system with a demand of 9.3 mg/l.
- Step 1
  - Residual = 0.7 mg/l
  - Demand = 9.3 mg/l
  - Dosage = ?
- Step 2
  - Dosage = Demand + Residual
- Step 3
  - ? = 9.3 mg/l + 0.7 mg/l

1. Disinfection

- Determine the chlorine dosage needed to achieve a 0.7 mg/l residual in a system with a demand of 9.3 mg/l.
- Step 1
  - Residual = 0.7 mg/l
  - Demand = 9.3 mg/l
  - Dosage = ?
- Step 2
  - Dosage = Demand + Residual
- Step 3
  - ? = 9.3 mg/l + 0.7 mg/l
- Step 4

1. Disinfection

- Determine the chlorine dosage needed to achieve a 0.7 mg/l residual in a system with a demand of 9.3 mg/l.
- Step 1
  - Residual = 0.7 mg/l
  - Demand = 9.3 mg/l
  - Dosage = ?
- Step 2
  - Dosage = Demand + Residual
- Step 3
  - ? = 9.3 mg/l + 0.7 mg/l
- Step 4
  - Dosage = 10 mg/l

2. Disinfection – Your Turn!

- **Determine the chlorine dosage needed to achieve a 3.5 mg/l residual in a system with a demand of 8.0 mg/l.**

2. Disinfection – Your Turn!

- **Determine the chlorine dosage needed to achieve a 3.5 mg/l residual in a system with a demand of 8.0 mg/l.**
- **Step 1**

2. Disinfection – Your Turn!

- **Determine the chlorine dosage needed to achieve a 3.5 mg/l residual in a system with a demand of 8.0 mg/l.**
- **Step 1**
  - **Residual = 3.5 mg/l**
  - **Demand = 8.0 mg/l**
  - **Dosage = ?**

2. Disinfection – Your Turn!

- **Determine the chlorine dosage needed to achieve a 3.5 mg/l residual in a system with a demand of 8.0 mg/l.**
- **Step 1**
  - **Residual = 3.5 mg/l**
  - **Demand = 8.0 mg/l**
  - **Dosage = ?**
- **Step 2**

2. Disinfection – Your Turn!

- **Determine the chlorine dosage needed to achieve a 3.5 mg/l residual in a system with a demand of 8.0 mg/l.**
- **Step 1**
  - **Residual = 3.5 mg/l**
  - **Demand = 8.0 mg/l**
  - **Dosage = ?**
- **Step 2**
  - **Dosage = Demand + Residual**

2. Disinfection – Your Turn!

- **Determine the chlorine dosage needed to achieve a 3.5 mg/l residual in a system with a demand of 8.0 mg/l.**
- **Step 1**
  - **Residual = 3.5 mg/l**
  - **Demand = 8.0 mg/l**
  - **Dosage = ?**
- **Step 2**
  - **Dosage = Demand + Residual**
- **Step 3**

2. Disinfection – Your Turn!

- **Determine the chlorine dosage needed to achieve a 3.5 mg/l residual in a system with a demand of 8.0 mg/l.**
- **Step 1**
  - **Residual = 3.5 mg/l**
  - **Demand = 8.0 mg/l**
  - **Dosage = ?**
- **Step 2**
  - **Dosage = Demand + Residual**
- **Step 3**
  - **? = 8.0 mg/l + 3.5 mg/l**

2. Disinfection – Your Turn!

- **Determine the chlorine dosage needed to achieve a 3.5 mg/l residual in a system with a demand of 8.0 mg/l.**
- **Step 1**
  - **Residual = 3.5 mg/l**
  - **Demand = 8.0 mg/l**
  - **Dosage = ?**
- **Step 2**
  - **Dosage = Demand + Residual**
- **Step 3**
  - **? = 8.0 mg/l + 3.5 mg/l**
- **Step 4**

2. Disinfection – Your Turn!

- Determine the chlorine dosage needed to achieve a 3.5 mg/l residual in a system with a demand of 8.0 mg/l.
- Step 1
  - Residual = 3.5 mg/l
  - Demand = 8.0 mg/l
  - Dosage = ?
- Step 2
  - Dosage = Demand + Residual
- Step 3
  - ? = 8.0 mg/l + 3.5 mg/l
- Step 4
  - Dosage = **11.5 mg/l**

3. Disinfection

- **Determine the demand if a residual of 0.5 mg/l is sustained in a system after dossing 3.2 mg/l chlorine.**

3. Disinfection

- **Determine the demand if a residual of 0.5 mg/l is sustained in a system after dossing 3.2 mg/l chlorine.**
- **Step 1**

3. Disinfection

- **Determine the demand if a residual of 0.5 mg/l is sustained in a system after dossing 3.2 mg/l chlorine.**
- **Step 1**
  - **Residual = 0.5 mg/l**
  - **Dosage = 3.2 mg/l**
  - **Demand = ? mg/l**

3. Disinfection

- **Determine the demand if a residual of 0.5 mg/l is sustained in a system after dossing 3.2 mg/l chlorine.**
- **Step 1**
  - **Residual = 0.5 mg/l**
  - **Dosage = 3.2 mg/l**
  - **Demand = ? mg/l**
- **Step 2**

3. Disinfection

- **Determine the demand if a residual of 0.5 mg/l is sustained in a system after dossing 3.2 mg/l chlorine.**
- **Step 1**
  - **Residual = 0.5 mg/l**
  - **Dosage = 3.2 mg/l**
  - **Demand = ? mg/l**
- **Step 2**
  - **Dosage = Demand + Residual**

3. Disinfection

- **Determine the demand if a residual of 0.5 mg/l is sustained in a system after dossing 3.2 mg/l chlorine.**
- **Step 1**
  - **Residual = 0.5 mg/l**
  - **Dosage = 3.2 mg/l**
  - **Demand = ? mg/l**
- **Step 2**
  - **Dosage = Demand + Residual**
- **Step 3**

3. Disinfection

- Determine the demand if a residual of 0.5 mg/l is sustained in a system after dossing 3.2 mg/l chlorine.
- Step 1
  - Residual = 0.5 mg/l
  - Dosage = 3.2 mg/l
  - Demand = ? mg/l
- Step 2
  - Dosage = Demand + Residual
- Step 3
  - 3.2 mg/l = ? + 0.5 mg/l

3. Disinfection

- Determine the demand if a residual of 0.5 mg/l is sustained in a system after dossing 3.2 mg/l chlorine.
- Step 1
  - Residual = 0.5 mg/l
  - Dosage = 3.2 mg/l
  - Demand = ? mg/l
- Step 2
  - Dosage = Demand + Residual
- Step 3
  - 3.2 mg/l = ? + 0.5 mg/l

3. Disinfection

- Determine the demand if a residual of 0.5 mg/l is sustained in a system after dossing 3.2 mg/l chlorine.
- Step 1
  - Residual = 0.5 mg/l
  - Dosage = 3.2 mg/l
  - Demand = ? mg/l
- Step 2
  - Dosage = Demand + Residual
- Step 3
  - 3.2 mg/l = ? + 0.5 mg/l

+ -

X ÷

3. Disinfection

- Determine the demand if a residual of 0.5 mg/l is sustained in a system after dossing 3.2 mg/l chlorine.
- Step 1
  - Residual = 0.5 mg/l
  - Dosage = 3.2 mg/l
  - Demand = ? mg/l
- Step 2
  - Dosage = Demand + Residual
- Step 3
  - 3.2 mg/l = ? + 0.5 mg/l ➔ ? = 3.2 mg/l - 0.5 mg/l

+ -

X ÷

3. Disinfection

- Determine the demand if a residual of 0.5 mg/l is sustained in a system after dossing 3.2 mg/l chlorine.
- Step 1
  - Residual = 0.5 mg/l
  - Dosage = 3.2 mg/l
  - Demand = ? mg/l
- Step 2
  - Dosage = Demand + Residual
- Step 3
  - 3.2 mg/l = ? + 0.5 mg/l ? = 3.2 mg/l - 0.5 mg/l
- Step 4

3. Disinfection

- Determine the demand if a residual of 0.5 mg/l is sustained in a system after dossing 3.2 mg/l chlorine.
- Step 1
  - Residual = 0.5 mg/l
  - Dosage = 3.2 mg/l
  - Demand = ? mg/l
- Step 2
  - Dosage = Demand + Residual
- Step 3
  - 3.2 mg/l = ? + 0.5 mg/l ? = 3.2 mg/l - 0.5 mg/l
- Step 4
  - Demand = <u>2.7 mg/l</u>

4. Disinfection – Your Turn!

- **Determine the demand if a residual of 0.8 mg/l is sustained in a system after dossing 9.6 mg/l chlorine.**

4. Disinfection – Your Turn!

- **Determine the demand if a residual of 0.8 mg/l is sustained in a system after dossing 9.6 mg/l chlorine.**
- **Step 1**

4. Disinfection – Your Turn!

- **Determine the demand if a residual of 0.8 mg/l is sustained in a system after dossing 9.6 mg/l chlorine.**
- **Step 1**
  - **Residual = 0.8 mg/l**
  - **Dosage = 9.6 mg/l**
  - **Demand = ? mg/l**

4. Disinfection – Your Turn!

- **Determine the demand if a residual of 0.8 mg/l is sustained in a system after dossing 9.6 mg/l chlorine.**
- **Step 1**
  - **Residual = 0.8 mg/l**
  - **Dosage = 9.6 mg/l**
  - **Demand = ? mg/l**
- **Step 2**

4. Disinfection – Your Turn!

- **Determine the demand if a residual of 0.8 mg/l is sustained in a system after dossing 9.6 mg/l chlorine.**
- **Step 1**
  - **Residual = 0.8 mg/l**
  - **Dosage = 9.6 mg/l**
  - **Demand = ? mg/l**
- **Step 2**
  - **Dosage = Demand + Residual**

4. Disinfection – Your Turn!

- **Determine the demand if a residual of 0.8 mg/l is sustained in a system after dossing 9.6 mg/l chlorine.**
- **Step 1**
  - **Residual = 0.8 mg/l**
  - **Dosage = 9.6 mg/l**
  - **Demand = ? mg/l**
- **Step 2**
  - **Dosage = Demand + Residual**
- **Step 3**

4. Disinfection – Your Turn!

- **Determine the demand if a residual of 0.8 mg/l is sustained in a system after dossing 9.6 mg/l chlorine.**
- **Step 1**
  - **Residual = 0.8 mg/l**
  - **Dosage = 9.6 mg/l**
  - **Demand = ? mg/l**
- **Step 2**
  - **Dosage = Demand + Residual**
- **Step 3**
  - **9.6 mg/l = ? + 0.8 mg/l**

4. Disinfection – Your Turn!

- **Determine the demand if a residual of 0.8 mg/l is sustained in a system after dossing 9.6 mg/l chlorine.**
- **Step 1**
  - **Residual = 0.8 mg/l**
  - **Dosage = 9.6 mg/l**
  - **Demand = ? mg/l**
- **Step 2**
  - **Dosage = Demand + Residual**
- **Step 3**
  - **9.6 mg/l = ? + 0.8 mg/l ➔ ? = 9.6 mg/l - 0.8 mg/l**

4. Disinfection – Your Turn!

- **Determine the demand if a residual of 0.8 mg/l is sustained in a system after dossing 9.6 mg/l chlorine.**
- **Step 1**
  - **Residual = 0.8 mg/l**
  - **Dosage = 9.6 mg/l**
  - **Demand = ? mg/l**
- **Step 2**
  - **Dosage = Demand + Residual**
- **Step 3**
  - **9.6 mg/l = ? + 0.8 mg/l ➔ ? = 9.6 mg/l - 0.8 mg/l**
- **Step 4**

4. Disinfection – Your Turn!

- Determine the demand if a residual of 0.8 mg/l is sustained in a system after dossing 9.6 mg/l chlorine.
- Step 1
  - Residual = 0.8 mg/l
  - Dosage = 9.6 mg/l
  - Demand = ? mg/l
- Step 2
  - Dosage = Demand + Residual
- Step 3
  - 9.6 mg/l = ? + 0.8 mg/l ➔ ? = 9.6 mg/l - 0.8 mg/l
- Step 4
  - Demand = **8.8 mg/l**

1. Disinfection

- **Determine how much 100% chlorine must be added to 350,000 gallons of water to produce a 2.5 mg/l dosage.**

1. Disinfection

- **Determine how much 100% chlorine must be added to 350,000 gallons of water to produce a 2.5 mg/l dosage.**
- **Step 1**

1. Disinfection

- **Determine how much 100% chlorine must be added to 350,000 gallons of water to produce a 2.5 mg/l dosage.**
- **Step 1**
  - **350,000 gallons**
  - **2.5 mg/l dosage**

1. Disinfection

- Determine how much 100% chlorine must be added to 350,000 gallons of water to produce a 2.5 mg/l dosage.
- Step 1
  - 350,000 gallons
  - 2.5 mg/l dosage
  - ? Lbs.

1. Disinfection

- **Determine how much 100% chlorine must be added to 350,000 gallons of water to produce a 2.5 mg/l dosage.**
- **Step 1**
  - **350,000 gallons ➔ 0.35 MG**
  - **2.5 mg/l dosage**
  - **? Lbs.**

1. Disinfection

- **Determine how much 100% chlorine must be added to 350,000 gallons of water to produce a 2.5 mg/l dosage.**
- **Step 1**
  - **350,000 gallons ➔ 0.35 MG**
  - **2.5 mg/l dosage**
  - **? Lbs.**
- **Step 2**

1. Disinfection

- **Determine how much 100% chlorine must be added to 350,000 gallons of water to produce a 2.5 mg/l dosage.**
- **Step 1**
  - **350,000 gallons ➔ 0.35 MG**
  - **2.5 mg/l dosage**
  - **? Lbs.**
- **Step 2**
  - **(MG) (mg/l) (8.34) = lbs.**

1. Disinfection

- **Determine how much 100% chlorine must be added to 350,000 gallons of water to produce a 2.5 mg/l dosage.**
- **Step 1**
  - **350,000 gallons ➔ 0.35 MG**
  - **2.5 mg/l dosage**
  - **? Lbs.**
- **Step 2**
  - **(MG) (mg/l) (8.34) = lbs.**
- **Step 3**

1. Disinfection

- Determine how much 100% chlorine must be added to 350,000 gallons of water to produce a 2.5 mg/l dosage.
- Step 1
  - 350,000 gallons ➔ 0.35 MG
  - 2.5 mg/l dosage
  - ? Lbs.
- Step 2
  - (MG) (mg/l) (8.34) = lbs.
- Step 3
  - 0.35 x 2.5 x 8.34 = ?

1. Disinfection

- Determine how much 100% chlorine must be added to 350,000 gallons of water to produce a 2.5 mg/l dosage.
- Step 1
  - 350,000 gallons → 0.35 MG
  - 2.5 mg/l dosage
  - ? Lbs.
- Step 2
  - (MG) (mg/l) (8.34) = lbs.
- Step 3
  - 0.35 x 2.5 x 8.34 = ?
- Step 4

1. Disinfection

- Determine how much 100% chlorine must be added to 350,000 gallons of water to produce a 2.5 mg/l dosage.
- Step 1
  - 350,000 gallons ➔ 0.35 MG
  - 2.5 mg/l dosage
  - ? Lbs.
- Step 2
  - (MG) (mg/l) (8.34) = lbs.
- Step 3
  - 0.35 x 2.5 x 8.34 = ?
- Step 4
  - Lbs. = 7.3

2. Disinfection

- **Determine how much 100% chlorine must be added to 1,250,000 gallons of water to produce a 5.8 mg/l dosage.**

2. Disinfection

- **Determine how much 100% chlorine must be added to 1,250,000 gallons of water to produce a 5.8 mg/l dosage.**
- **Step 1**

2. Disinfection

- **Determine how much 100% chlorine must be added to 1,250,000 gallons of water to produce a 5.8 mg/l dosage.**
- **Step 1**
  - **1,250,000 gallons**
  - **5.8 mg/l dosage**
  - **? Lbs.**

2. Disinfection

- **Determine how much 100% chlorine must be added to 1,250,000 gallons of water to produce a 5.8 mg/l dosage.**
- **Step 1**
  - **1,250,000 gallons → 1.25 MG**
  - **5.8 mg/l dosage**
  - **? Lbs.**

2. Disinfection

- **Determine how much 100% chlorine must be added to 1,250,000 gallons of water to produce a 5.8 mg/l dosage.**
- **Step 1**
  - **1,250,000 gallons → 1.25 MG**
  - **5.8 mg/l dosage**
  - **? Lbs.**
- **Step 2**

2. Disinfection

- **Determine how much 100% chlorine must be added to 1,250,000 gallons of water to produce a 5.8 mg/l dosage.**
- **Step 1**
  - **1,250,000 gallons → 1.25 MG**
  - **5.8 mg/l dosage**
  - **? Lbs.**
- **Step 2**
  - **(MG) (mg/l) (8.34) = lbs.**

2. Disinfection

- **Determine how much 100% chlorine must be added to 1,250,000 gallons of water to produce a 5.8 mg/l dosage.**
- **Step 1**
  - **1,250,000 gallons → 1.25 MG**
  - **5.8 mg/l dosage**
  - **? Lbs.**
- **Step 2**
  - **(MG) (mg/l) (8.34) = lbs.**
- **Step 3**

2. Disinfection

- **Determine how much 100% chlorine must be added to 1,250,000 gallons of water to produce a 5.8 mg/l dosage.**
- **Step 1**
  - **1,250,000 gallons → 1.25 MG**
  - **5.8 mg/l dosage**
  - **? Lbs.**
- **Step 2**
  - **(MG) (mg/l) (8.34) = lbs.**
- **Step 3**
  - **1.25 x 5.8 x 8.34 = ?**

2. Disinfection

- Determine how much 100% chlorine must be added to 1,250,000 gallons of water to produce a 5.8 mg/l dosage.
- Step 1
  - 1,250,000 gallons ➔ 1.25 MG
  - 5.8 mg/l dosage
  - ? Lbs.
- Step 2
  - (MG) (mg/l) (8.34) = lbs.
- Step 3
  - 1.25 x 5.8 x 8.34 = ?
- Step 4

2. Disinfection

- Determine how much 100% chlorine must be added to 1,250,000 gallons of water to produce a 5.8 mg/l dosage.
- Step 1
  - 1,250,000 gallons ➔ 1.25 MG
  - 5.8 mg/l dosage
  - ? Lbs.
- Step 2
  - (MG) (mg/l) (8.34) = lbs.
- Step 3
  - 1.25 x 5.8 x 8.34 = ?
- Step 4
  - Lbs. = **60.5**

3. Disinfection – Your Turn!

- **Determine how much 100% chlorine must be added to 15,000 gallons of water to produce a 2.0 mg/l dosage.**

3. Disinfection – Your Turn!

- **Determine how much 100% chlorine must be added to 15,000 gallons of water to produce a 2.0 mg/l dosage.**
- **Step 1**

3. Disinfection – Your Turn!

- **Determine how much 100% chlorine must be added to 15,000 gallons of water to produce a 2.0 mg/l dosage.**
- **Step 1**
  - **15,000 gallons**
  - **2.0 mg/l dosage**
  - **? Lbs.**

3. Disinfection – Your Turn!

- **Determine how much 100% chlorine must be added to 15,000 gallons of water to produce a 2.0 mg/l dosage.**
- **Step 1**
  - **15,000 gallons ➔ 0.015 MG**
  - **2.0 mg/l dosage**
  - **? Lbs.**

3. Disinfection – Your Turn!

- **Determine how much 100% chlorine must be added to 15,000 gallons of water to produce a 2.0 mg/l dosage.**
- **Step 1**
  - **15,000 gallons ➔ 0.015 MG**
  - **2.0 mg/l dosage**
  - **? Lbs.**
- **Step 2**

3. Disinfection – Your Turn!

- **Determine how much 100% chlorine must be added to 15,000 gallons of water to produce a 2.0 mg/l dosage.**
- **Step 1**
  - **15,000 gallons ➔ 0.015 MG**
  - **2.0 mg/l dosage**
  - **? Lbs.**
- **Step 2**
  - **(MG) (mg/l) (8.34) = lbs.**

3. Disinfection – Your Turn!

- **Determine how much 100% chlorine must be added to 15,000 gallons of water to produce a 2.0 mg/l dosage.**
- **Step 1**
  - **15,000 gallons ➔ 0.015 MG**
  - **2.0 mg/l dosage**
  - **? Lbs.**
- **Step 2**
  - **(MG) (mg/l) (8.34) = lbs.**
- **Step 3**

3. Disinfection – Your Turn!

- **Determine how much 100% chlorine must be added to 15,000 gallons of water to produce a 2.0 mg/l dosage.**
- **Step 1**
  - **15,000 gallons ➔ 0.015 MG**
  - **2.0 mg/l dosage**
  - **? Lbs.**
- **Step 2**
  - **(MG) (mg/l) (8.34) = lbs.**
- **Step 3**
  - **0.015 x 2.0 x 8.34 = ?**

3. Disinfection – Your Turn!

- **Determine how much 100% chlorine must be added to 15,000 gallons of water to produce a 2.0 mg/l dosage.**
- **Step 1**
  - **15,000 gallons ➔ 0.015 MG**
  - **2.0 mg/l dosage**
  - **? Lbs.**
- **Step 2**
  - **(MG) (mg/l) (8.34) = lbs.**
- **Step 3**
  - **0.015 x 2.0 x 8.34 = ?**
- **Step 4**

3. Disinfection – Your Turn!

- Determine how much 100% chlorine must be added to 15,000 gallons of water to produce a 2.0 mg/l dosage.
- Step 1
  - 15,000 gallons ➔ 0.015 MG
  - 2.0 mg/l dosage
  - ? Lbs.
- Step 2
  - (MG) (mg/l) (8.34) = lbs.
- Step 3
  - 0.015 x 2.0 x 8.34 = ?
- Step 4
  - Lbs. = <u>0.25</u>

1. Disinfection

- **How many pounds of 5% bleach are needed to equal 25 pounds of 100% chlorine?**

1. Disinfection

- **How many pounds of 5% bleach are needed to equal 25 pounds of 100% chlorine?**
- **Step 1**

1. Disinfection

- **How many pounds of 5% bleach are needed to equal 25 pounds of 100% chlorine?**
- **Step 1**
  - **5% chlorine**

1. Disinfection

- How many pounds of 5% bleach are needed to equal 25 pounds of 100% chlorine?
- Step 1
  - 5% chlorine

1. Disinfection

- How many pounds of 5% bleach are needed to equal 25 pounds of 100% chlorine?
- Step 1
  - 5% chlorine
  - 25 lbs. pure

1. Disinfection

- How many pounds of 5% bleach are needed to equal 25 pounds of 100% chlorine?
- Step 1
  - 5% chlorine
  - 25 lbs. pure

1. Disinfection

- How many pounds of 5% bleach are needed to equal 25 pounds of 100% chlorine?
- Step 1
  - 5% chlorine
  - 25 lbs. pure
  - ? Lbs. compound

1. Disinfection

- How many pounds of 5% bleach are needed to equal 25 pounds of 100% chlorine?
- Step 1
  - 5% chlorine = 0.05 chlorine
  - 25 lbs. pure
  - ? Lbs. compound

1. Disinfection

- How many pounds of 5% bleach are needed to equal 25 pounds of 100% chlorine?
- Step 1
  - 5% chlorine = 0.05 chlorine
  - 25 lbs. pure
  - ? Lbs. compound
- Step 2

1. Disinfection

- How many pounds of 5% bleach are needed to equal 25 pounds of 100% chlorine?
- Step 1
  - 5% chlorine = 0.05 chlorine
  - 25 lbs. pure
  - ? Lbs. compound
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine

1. Disinfection

- How many pounds of 5% bleach are needed to equal 25 pounds of 100% chlorine?
- Step 1
  - 5% chlorine = 0.05 chlorine
  - 25 lbs. pure
  - ? Lbs. compound
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine
- Step 3

1. Disinfection

- How many pounds of 5% bleach are needed to equal 25 pounds of 100% chlorine?
- Step 1
  - 5% chlorine = 0.05 chlorine
  - 25 lbs. pure
  - ? Lbs. compound
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine
- Step 3
  - ? = 25 ÷ 0.05

1. Disinfection

- How many pounds of 5% bleach are needed to equal 25 pounds of 100% chlorine?
- Step 1
  - 5% chlorine = 0.05 chlorine
  - 25 lbs. pure
  - ? Lbs. compound
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine
- Step 3
  - ? = 25 ÷ 0.05
- Step 4

1. Disinfection

- How many pounds of 5% bleach are needed to equal 25 pounds of 100% chlorine?
- Step 1
  - 5% chlorine = 0.05 chlorine
  - 25 lbs. pure
  - ? Lbs. compound
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine
- Step 3
  - ? = 25 ÷ 0.05
- Step 4
  - = <u>500 Lbs. Compound</u>

2. Disinfection – Your Turn!

- **How many pounds of 65% calcium hypochlorite are needed to equal 10 pounds of 100% chlorine?**

2. Disinfection- Your Turn!

- **How many pounds of 65% calcium hypochlorite are needed to equal 10 pounds of 100% chlorine?**
- **Step 1**

2. Disinfection- Your Turn!

- How many pounds of 65% calcium hypochlorite are needed to equal 10 pounds of 100% chlorine?
- Step 1
  - 65% chlorine = 0.65 chlorine
  - 10 Lbs. pure
  - ? Lbs. compound

2. Disinfection- Your Turn!

- How many pounds of 65% calcium hypochlorite are needed to equal 10 pounds of 100% chlorine?
- Step 1
  - 65% chlorine = 0.65 chlorine
  - 10 Lbs. pure
  - ? Lbs. compound
- Step 2

2. Disinfection- Your Turn!

- How many pounds of 65% calcium hypochlorite are needed to equal 10 pounds of 100% chlorine?
- Step 1
  - 65% chlorine = 0.65 chlorine
  - 10 Lbs. pure
  - ? Lbs. compound
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine

2. Disinfection- Your Turn!

- How many pounds of 65% calcium hypochlorite are needed to equal 10 pounds of 100% chlorine?
- Step 1
  - 65% chlorine = 0.65 chlorine
  - 10 Lbs. pure
  - ? Lbs. compound
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine
- Step 3

2. Disinfection- Your Turn!

- How many pounds of 65% calcium hypochlorite are needed to equal 10 pounds of 100% chlorine?
- Step 1
  - 65% chlorine = 0.65 chlorine
  - 10 Lbs. pure
  - ? Lbs. compound
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine
- Step 3
  - ? = 10 / 0.65

2. Disinfection- Your Turn!

- How many pounds of 65% calcium hypochlorite are needed to equal 10 pounds of 100% chlorine?
- Step 1
  - 65% chlorine = 0.65 chlorine
  - 10 Lbs. pure
  - ? Lbs. compound
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine
- Step 3
  - ? = 10 / 0.65
- Step 4

2. Disinfection- Your Turn!

- How many pounds of 65% calcium hypochlorite are needed to equal 10 pounds of 100% chlorine?
- Step 1
  - 65% chlorine = 0.65 chlorine
  - 10 Lbs. pure
  - ? Lbs. compound
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine
- Step 3
  - ? = 10 / 0.65
- Step 4
  - = <u>15.4 Lbs. Compound</u>

3. Disinfection

- **How many pounds of 100% chlorine are needed to equal 50 pounds of 15% bleach?**

3. Disinfection

- **How many pounds of 100% chlorine are needed to equal 50 pounds of 15% bleach?**
- **Step 1**

3. Disinfection

- How many pounds of 100% chlorine are needed to equal 50 pounds of 15% bleach?
- Step 1
  - 15% chlorine = 0.15 chlorine

3. Disinfection

- How many pounds of 100% chlorine are needed to equal 50 pounds of 15% bleach?
- Step 1
  - 15% chlorine = 0.15 chlorine
  - 50 Lbs. compound

3. Disinfection

- How many pounds of 100% chlorine are needed to equal 50 pounds of 15% bleach?
- Step 1
  - 15% chlorine = 0.15 chlorine
  - 50 Lbs. compound
  - ? Lbs. pure

3. Disinfection

- How many pounds of 100% chlorine are needed to equal 50 pounds of 15% bleach?
- Step 1
  - 15% chlorine = 0.15 chlorine
  - 50 Lbs. compound
  - ? Lbs. pure
- Step 2

3. Disinfection

- How many pounds of 100% chlorine are needed to equal 50 pounds of 15% bleach?
- Step 1
  - 15% chlorine = 0.15 chlorine
  - 50 Lbs. compound
  - ? Lbs. pure
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine

3. Disinfection

- How many pounds of 100% chlorine are needed to equal 50 pounds of 15% bleach?
- Step 1
  - 15% chlorine = 0.15 chlorine
  - 50 Lbs. compound
  - ? Lbs. pure
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine
- Step 3

3. Disinfection

- How many pounds of 100% chlorine are needed to equal 50 pounds of 15% bleach?
- Step 1
  - 15% chlorine = 0.15 chlorine
  - 50 Lbs. compound
  - ? Lbs. pure
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine
- Step 3
  - 50 = ? ÷ 0.15

3. Disinfection

- How many pounds of 100% chlorine are needed to equal 50 pounds of 15% bleach?
- Step 1
  - 15% chlorine = 0.15 chlorine
  - 50 Lbs. compound
  - ? Lbs. pure
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine
- Step 3
  - 50 = ? ÷ 0.15 → ? = 50 x 0.15

3. Disinfection

- How many pounds of 100% chlorine are needed to equal 50 pounds of 15% bleach?
- Step 1
  - 15% chlorine = 0.15 chlorine
  - 50 Lbs. compound
  - ? Lbs. pure
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine
- Step 3
  - 50 = ? ÷ 0.15 ➔ ? = 50 x 0.15
- Step 4

3. Disinfection

- How many pounds of 100% chlorine are needed to equal 50 pounds of 15% bleach?
- Step 1
  - 15% chlorine = 0.15 chlorine
  - 50 Lbs. compound
  - ? Lbs. pure
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine
- Step 3
  - 50 = ? ÷ 0.15 ➔ ? = 50 x 0.15
- Step 4
  - = <u>7.5 Lbs. Pure</u>

4. Disinfection – Your Turn!

- **How many pounds of 100% chlorine are needed to equal 63 pounds of 85% calcium hypochlorite?**

4. Disinfection – Your Turn!

- **How many pounds of 100% chlorine are needed to equal 63 pounds of 85% calcium hypochlorite?**
- **Step 1**

4. Disinfection – Your Turn!

- **How many pounds of 100% chlorine are needed to equal 63 pounds of 85% calcium hypochlorite?**
- **Step 1**
  - **85% compound = 0.85 compound**
  - **63 Lbs. compound**
  - **? Lbs. pure**

4. Disinfection – Your Turn!

- How many pounds of 100% chlorine are needed to equal 63 pounds of 85% calcium hypochlorite?
- Step 1
  - 85% compound = 0.85 compound
  - 63 Lbs. compound
  - ? Lbs. pure
- Step 2

4. Disinfection – Your Turn!

- How many pounds of 100% chlorine are needed to equal 63 pounds of 85% calcium hypochlorite?
- Step 1
  - 85% compound = 0.85 compound
  - 63 Lbs. compound
  - ? Lbs. pure
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine

4. Disinfection – Your Turn!

- How many pounds of 100% chlorine are needed to equal 63 pounds of 85% calcium hypochlorite?
- Step 1
  - 85% compound = 0.85 compound
  - 63 Lbs. compound
  - ? Lbs. pure
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine
- Step 3

4. Disinfection – Your Turn!

- How many pounds of 100% chlorine are needed to equal 63 pounds of 85% calcium hypochlorite?
- Step 1
  - 85% compound = 0.85 compound
  - 63 Lbs. compound
  - ? Lbs. pure
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine
- Step 3
  - 63 = ? ÷ 0.85

4. Disinfection – Your Turn!

- How many pounds of 100% chlorine are needed to equal 63 pounds of 85% calcium hypochlorite?
- Step 1
  - 85% compound = 0.85 compound
  - 63 Lbs. compound
  - ? Lbs. pure
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine
- Step 3
  - 63 = ? ÷ 0.85 ➔ ? = 63 x 0.85

4. Disinfection – Your Turn!

- How many pounds of 100% chlorine are needed to equal 63 pounds of 85% calcium hypochlorite?
- Step 1
  - 85% compound = 0.85 compound
  - 63 Lbs. compound
  - ? Lbs. pure
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine
- Step 3
  - 63 = ? ÷ 0.85 ➔ ? = 63 x 0.85
- Step 4

4. Disinfection – Your Turn!

- How many pounds of 100% chlorine are needed to equal 63 pounds of 85% calcium hypochlorite?
- Step 1
  - 85% compound = 0.85 compound
  - 63 Lbs. compound
  - ? Lbs. pure
- Step 2
  - Lbs. of compound = Lbs. pure chlorine divided by % chlorine
- Step 3
  - 63 = ? ÷ 0.85 ➔ ? = 63 x 0.85
- Step 4
  - = <u>53.6 Lbs. Pure</u>

1. Disinfection

- **Determine the dosage when you add 20 pounds of pure chlorine to a storage tank that holds 12,000 gallons of water.**

1. Disinfection

- **Determine the dosage when you add 20 pounds of pure chlorine to a storage tank that holds 12,000 gallons of water.**
- **Step 1**

1. Disinfection

- Determine the dosage when you add 20 pounds of pure chlorine to a storage tank that holds 12,000 gallons of water.
- Step 1
  - 20 Lbs. pure
  - 12,000 gallons
  - ? Dosage

1. Disinfection

- Determine the dosage when you add 20 pounds of pure chlorine to a storage tank that holds 12,000 gallons of water.
- Step 1
  - 20 Lbs. pure
  - 12,000 gallons = 0.012 MG
  - ? Dosage

1. Disinfection

- Determine the dosage when you add 20 pounds of pure chlorine to a storage tank that holds 12,000 gallons of water.
- Step 1
  - 20 Lbs. pure
  - 12,000 gallons = 0.012 MG
  - ? Dosage
- Step 2

1. Disinfection

- Determine the dosage when you add 20 pounds of pure chlorine to a storage tank that holds 12,000 gallons of water.
- Step 1
  - 20 Lbs. pure
  - 12,000 gallons = 0.012 MG
  - ? Dosage
- Step 2
  - Dosage = $\frac{\text{Lbs.}}{\text{MGD} \times 8.34}$

1. Disinfection

- Determine the dosage when you add 20 pounds of pure chlorine to a storage tank that holds 12,000 gallons of water.
- Step 1
  - 20 Lbs. pure
  - 12,000 gallons = 0.012 MG
  - ? Dosage
- Step 2
  - $\text{Dosage} = \frac{\text{Lbs.}}{\text{MGD} \times 8.34}$
- Step 3

1. Disinfection

- Determine the dosage when you add 20 pounds of pure chlorine to a storage tank that holds 12,000 gallons of water.
- Step 1
  - 20 Lbs. pure
  - 12,000 gallons = 0.012 MG
  - ? Dosage
- Step 2
  - $\text{Dosage} = \frac{\text{Lbs.}}{\text{MGD} \times 8.34}$
- Step 3
  - ? = 20 ÷ (0.012 x 8.34)

1. Disinfection

- Determine the dosage when you add 20 pounds of pure chlorine to a storage tank that holds 12,000 gallons of water.
- Step 1
  - 20 Lbs. pure
  - 12,000 gallons = 0.012 MG
  - ? Dosage
- Step 2
  - Dosage = $\frac{\text{Lbs.}}{\text{MGD} \times 8.34}$
- Step 3
  - ? = 20 ÷ (0.012 x 8.34)

1. Disinfection

- Determine the dosage when you add 20 pounds of pure chlorine to a storage tank that holds 12,000 gallons of water.
- Step 1
  - 20 Lbs. pure
  - 12,000 gallons = 0.012 MG
  - ? Dosage
- Step 2
  - $\text{Dosage} = \frac{\text{Lbs.}}{\text{MGD} \times 8.34}$
- Step 3
  - ? = 20 ÷ (0.012 x 8.34) ➔ 20 ÷ (0.1)

1. Disinfection

- Determine the dosage when you add 20 pounds of pure chlorine to a storage tank that holds 12,000 gallons of water.
- Step 1
  - 20 Lbs. pure
  - 12,000 gallons = 0.012 MG
  - ? Dosage
- Step 2
  - $\text{Dosage} = \frac{\text{Lbs.}}{\text{MGD} \times 8.34}$
- Step 3
  - ? = 20 ÷ (0.012 x 8.34) ➔ 20 ÷ (0.1)
- Step 4

1. Disinfection

- **Determine the dosage when you add 20 pounds of pure chlorine to a storage tank that holds 12,000 gallons of water.**
- Step 1
  - 20 Lbs. pure
  - 12,000 gallons = 0.012 MG
  - ? Dosage
- Step 2
  - Dosage = $\frac{\text{Lbs.}}{\text{MGD} \times 8.34}$
- Step 3
  - ? = 20 ÷ (0.012 x 8.34) ➔ 20 ÷ (0.1)
- Step 4
  - = <u>200 mg/l</u>

2. Disinfection – Your Turn!

- **Determine the dosage when you add 100 pounds of pure chlorine to a storage tank that holds 24,000,000 gallons of water.**

2. Disinfection – Your Turn!

- **Determine the dosage when you add 100 pounds of pure chlorine to a storage tank that holds 24,000,000 gallons of water.**
- **Step 1**

2. Disinfection – Your Turn!

- Determine the dosage when you add 100 pounds of pure chlorine to a storage tank that holds 24,000,000 gallons of water.
- Step 1
  - 100 Lbs. pure
  - 24,000,000 gallons = 24 MG
  - ? dosage

2. Disinfection – Your Turn!

- **Determine the dosage when you add 100 pounds of pure chlorine to a storage tank that holds 24,000,000 gallons of water.**
- **Step 1**
  - **100 Lbs. pure**
  - **24,000,000 gallons = 24 MG**
  - **? dosage**
- **Step 2**

2. Disinfection – Your Turn!

- Determine the dosage when you add 100 pounds of pure chlorine to a storage tank that holds 24,000,000 gallons of water.
- Step 1
  - 100 Lbs. pure
  - 24,000,000 gallons = 24 MG
  - ? dosage
- Step 2
  - Dosage = $\frac{\text{Lbs.}}{\text{MGD} \times 8.34}$

2. Disinfection – Your Turn!

- Determine the dosage when you add 100 pounds of pure chlorine to a storage tank that holds 24,000,000 gallons of water.
- Step 1
  - 100 Lbs. pure
  - 24,000,000 gallons = 24 MG
  - ? dosage
- Step 2
  - $\text{Dosage} = \dfrac{\text{Lbs.}}{\text{MGD} \times 8.34}$
- Step 3

2. Disinfection – Your Turn!

- **Determine the dosage when you add 100 pounds of pure chlorine to a storage tank that holds 24,000,000 gallons of water.**
- **Step 1**
  - **100 Lbs. pure**
  - **24,000,000 gallons = 24 MG**
  - **? dosage**
- **Step 2**
  - **Dosage = $\frac{\text{Lbs.}}{\text{MGD} \times 8.34}$**
- **Step 3**
  - **? = 100 ÷ (24 x 8.34)**

2. Disinfection – Your Turn!

- **Determine the dosage when you add 100 pounds of pure chlorine to a storage tank that holds 24,000,000 gallons of water.**
- **Step 1**
  - **100 Lbs. pure**
  - **24,000,000 gallons = 24 MG**
  - **? dosage**
- **Step 2**
  - **Dosage = $\frac{\text{Lbs.}}{\text{MGD} \times 8.34}$**
- **Step 3**
  - **? = 100 ÷ (24 x 8.34) ➔ 100 ÷ (200.16)**

2. Disinfection – Your Turn!

- **Determine the dosage when you add 100 pounds of pure chlorine to a storage tank that holds 24,000,000 gallons of water.**
- **Step 1**
  - **100 Lbs. pure**
  - **24,000,000 gallons = 24 MG**
  - **? dosage**
- **Step 2**
  - **Dosage = $\frac{\text{Lbs.}}{\text{MGD} \times 8.34}$**
- **Step 3**
  - **? = 100 ÷ (24 x 8.34) ➔ 100 ÷ (200.16)**
- **Step 4**

2. Disinfection – Your Turn!

- **Determine the dosage when you add 100 pounds of pure chlorine to a storage tank that holds 24,000,000 gallons of water.**
- Step 1
  - 100 Lbs. pure
  - 24,000,000 gallons = 24 MG
  - ? dosage
- Step 2
  - Dosage = $\frac{\text{Lbs.}}{\text{MGD} \times 8.34}$
- Step 3
  - ? = 100 ÷ (24 x 8.34) ➔ 100 ÷ (200.16)
- Step 4
  - = <u>0.5 mg/l</u>

3. Disinfection – Extra Practice

- **Determine the dosage when you add 27 pounds of pure chlorine to a storage tank that holds 360,000 gallons of water.**

3. Disinfection – Extra Practice

- **Determine the dosage when you add 27 pounds of pure chlorine to a storage tank that holds 360,000 gallons of water.**
- Step 1
  - 27 Lbs. pure
  - 360,000 gallons = 0.36 MG
  - ? dosage
- Step 2
  - $\text{Dosage} = \frac{\text{Lbs.}}{\text{MGD} \times 8.34}$
- Step 3
  - ? = 27 ÷ (0.36 x 8.34) ➔ 27 ÷ (3)
- Step 4
  - = 9 mg/l