

1.44L $\frac{232 \text{ mg cholesterol}}{100 \text{ mL blood}}$, 5.2L blood, — g cholesterol.

232 mg cholesterol	1 g chol	5.2L blood	100 mL
100 mL blood	1000 mg chol.	1 L	1

Conversion factors
= 1

Sep 12-7:53 AM

1.44c $3,666,500 \text{ m}^3 = \text{— l}$ exponential form

* $\frac{1 \text{ l}}{10^{-3} \text{ m}^3}$

$3,666,500 \text{ m}^3$	$\frac{1 \text{ l}}{10^{-3} \text{ m}^3}$	$= 3,666,500,000 \text{ l}$
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$3.6665 \times 10^9 \text{ l}$

Sep 12-8:01 AM

How many ℓ are in 8.55 miles³ of seawater?

$1 \ell = 10^{-3} \text{ m}^3$
 $1 \text{ mile} = 1.6093 \text{ Km}$

$$\frac{8.55 \text{ mi}^3}{1 \text{ mile}^3} \times \frac{(1.6093 \text{ Km})^3}{1 \text{ mile}^3} \times \frac{(1000)^3 \text{ m}^3}{1 \text{ km}^3} \times \frac{1 \ell}{10^{-3} \text{ m}^3}$$

$3.56 \times 10^{13} \ell$

Sep 12-8:08 AM

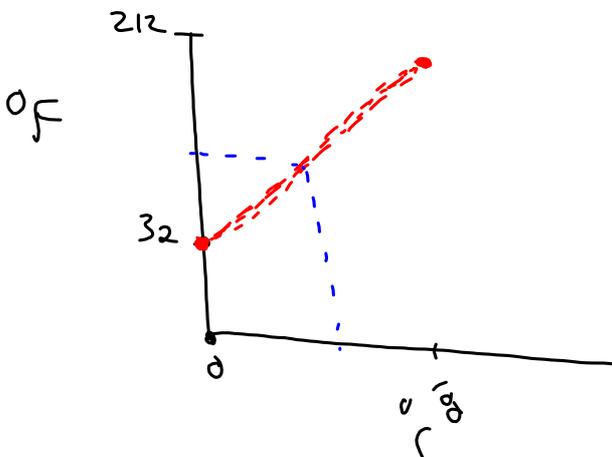
$^{\circ}\text{F} = \frac{9}{5}^{\circ}\text{C} + 32$

$Y = mX + b$
 eqn for straight line

2 points \rightarrow Line

	$^{\circ}\text{C}$	$^{\circ}\text{F}$
MP	0	32
BP	100	212

H_2O



Slope $\frac{\Delta Y}{\Delta X} = \frac{(212-32)}{(100-0)}$
 $= \frac{180}{100} = \frac{9}{5}$

Sep 12-8:39 AM

° MF	77	150
° JD	1500	2390
	FP	BP

$Y = mx + b$

$$°M = \frac{73}{890}(J) + -46$$

$$77 = \frac{73}{890}(1500) + (b)$$

$$b = -46$$

$$m = \frac{\Delta y}{\Delta x} = \frac{150 - 77}{2390 - 1500} = \frac{73}{890}$$

Sep 12-8:45 AM

Precision clustering

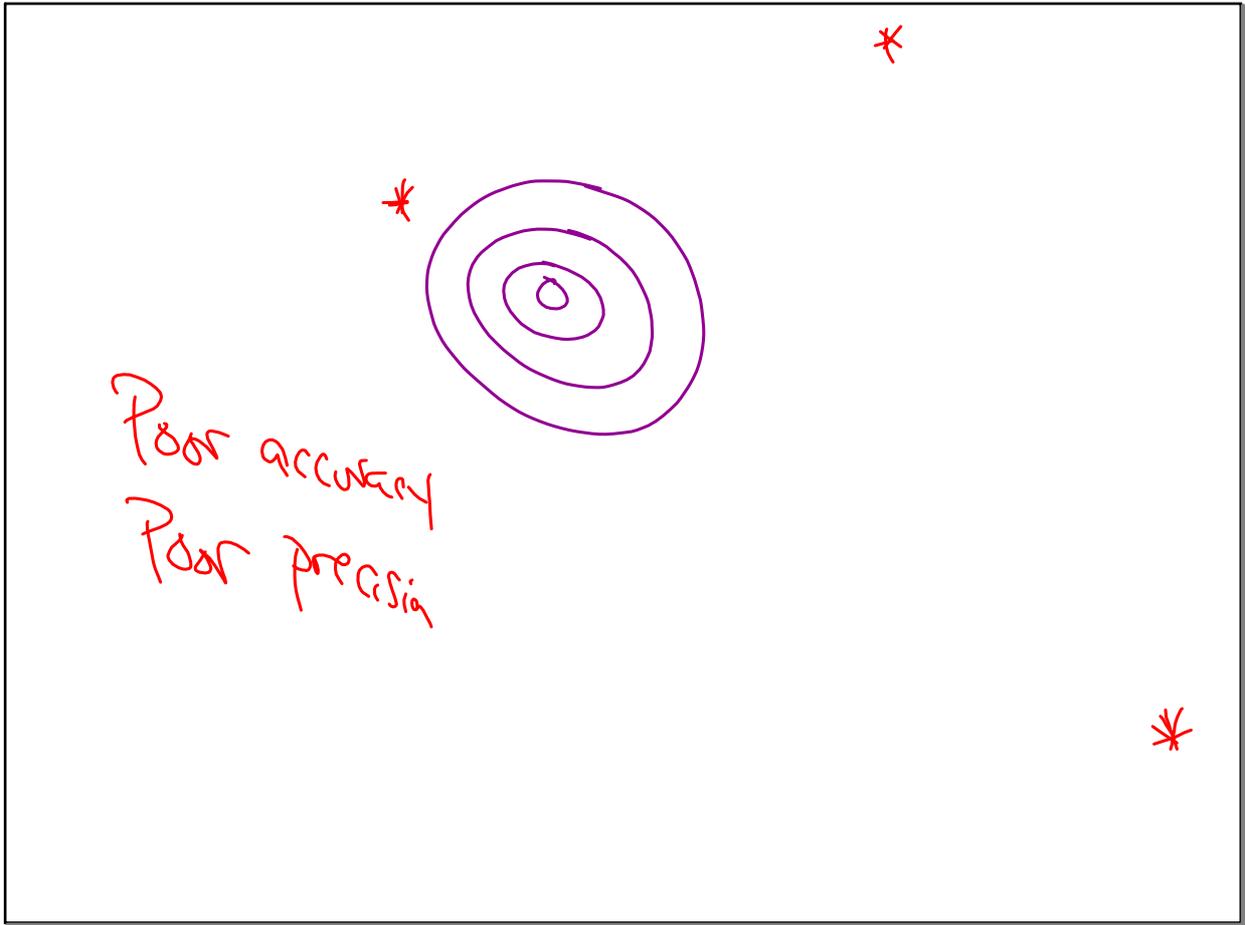
Not near target → Not accurate

Good precision

Accuracy bullseye

Good cluster on target

Sep 12-8:53 AM



Sep 12-8:58 AM

Separating Mixtures

① Sand + Gravel
1.22

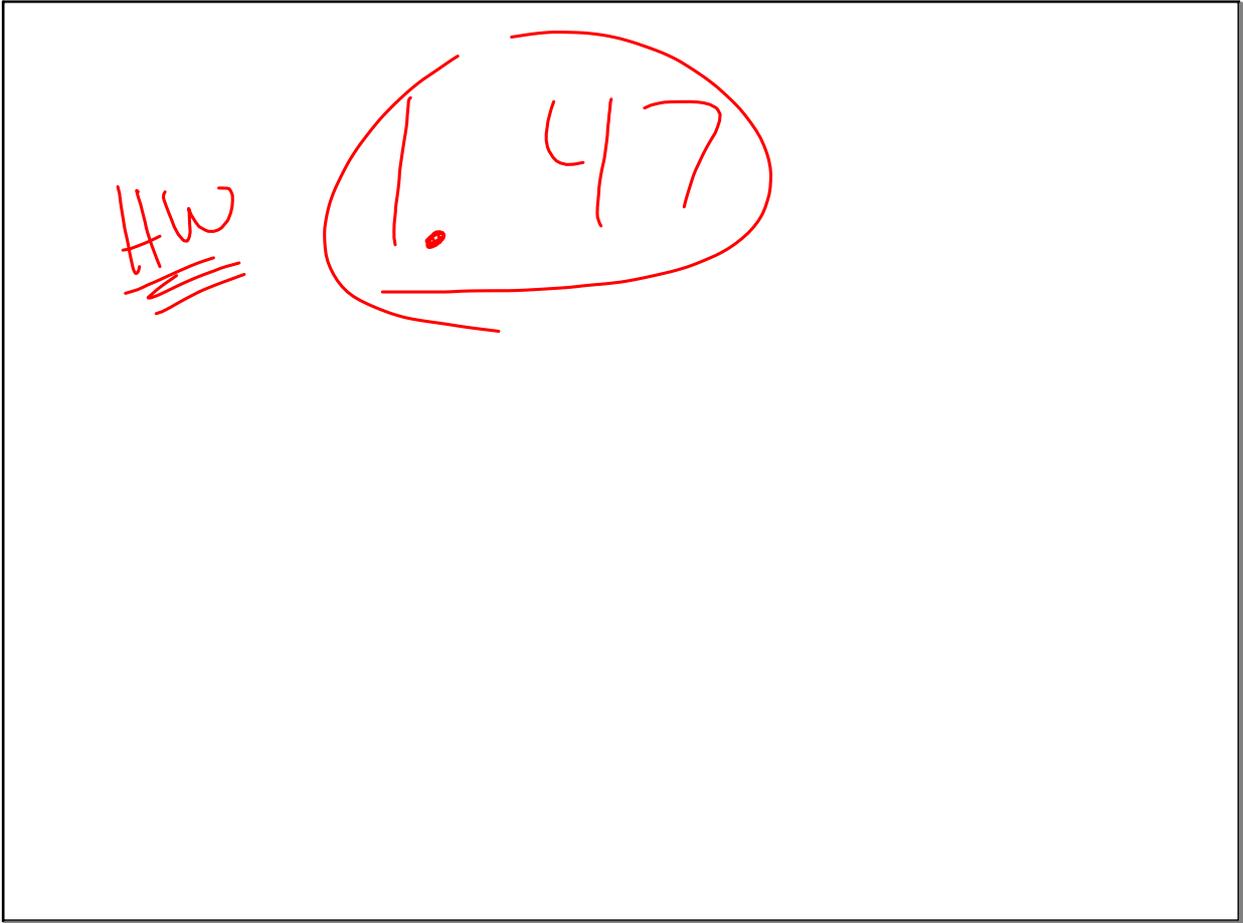
Filter
different sized solids

② Water + Alcoh.
BP 100°C 80°C

Distillation

The diagram shows a beaker containing a mixture of sand and gravel. The sand is represented by small purple dots, and the gravel is represented by larger circles. A red bracket labeled "1.22" is next to the beaker. Below the beaker, the word "Filter" is written in blue and circled, with the phrase "different sized solids" written below it. To the right, the chemical structures of water and ethanol are shown. Water is represented as H-O-H with lone pairs on the oxygen. Ethanol is represented as H-C-O-H with lone pairs on the oxygen and a methyl group (CH3) attached to the carbon. The word "Distillation" is written in red and circled. Above the structures, the boiling points are given: "BP 100°C" for water and "80°C" for alcohol.

Sep 12-8:59 AM



Sep 12-9:17 AM