Chapter 2 Review

Definitions

A testable statement

A testable statement

hypothesis

$$y = 1/x$$

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Inverse Proportion

Generalization that explains a body of known facts or phenomena

Generalization that explains a body of known facts or phenomena

Theory

Measurement near the accepted value

Measurement near the accepted value

Accuracy

Repeated close measurements

Repeated close measurements

Precision

$$y = x$$

$$y = x$$

Direct Proportion

Measure of Earth's gravitational pull on matter

Measure of Earth's gravitational pull on matter

Weight

Identify

Three base metric units

Three base metric units

meter, liter, gram

The unit cm^3 measures what quantity?

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Volume

Which observation is qualitative?

A) The mass is 74.3 kg.
B) The mixture is saturated.
C) The pH of the liquid is 7.

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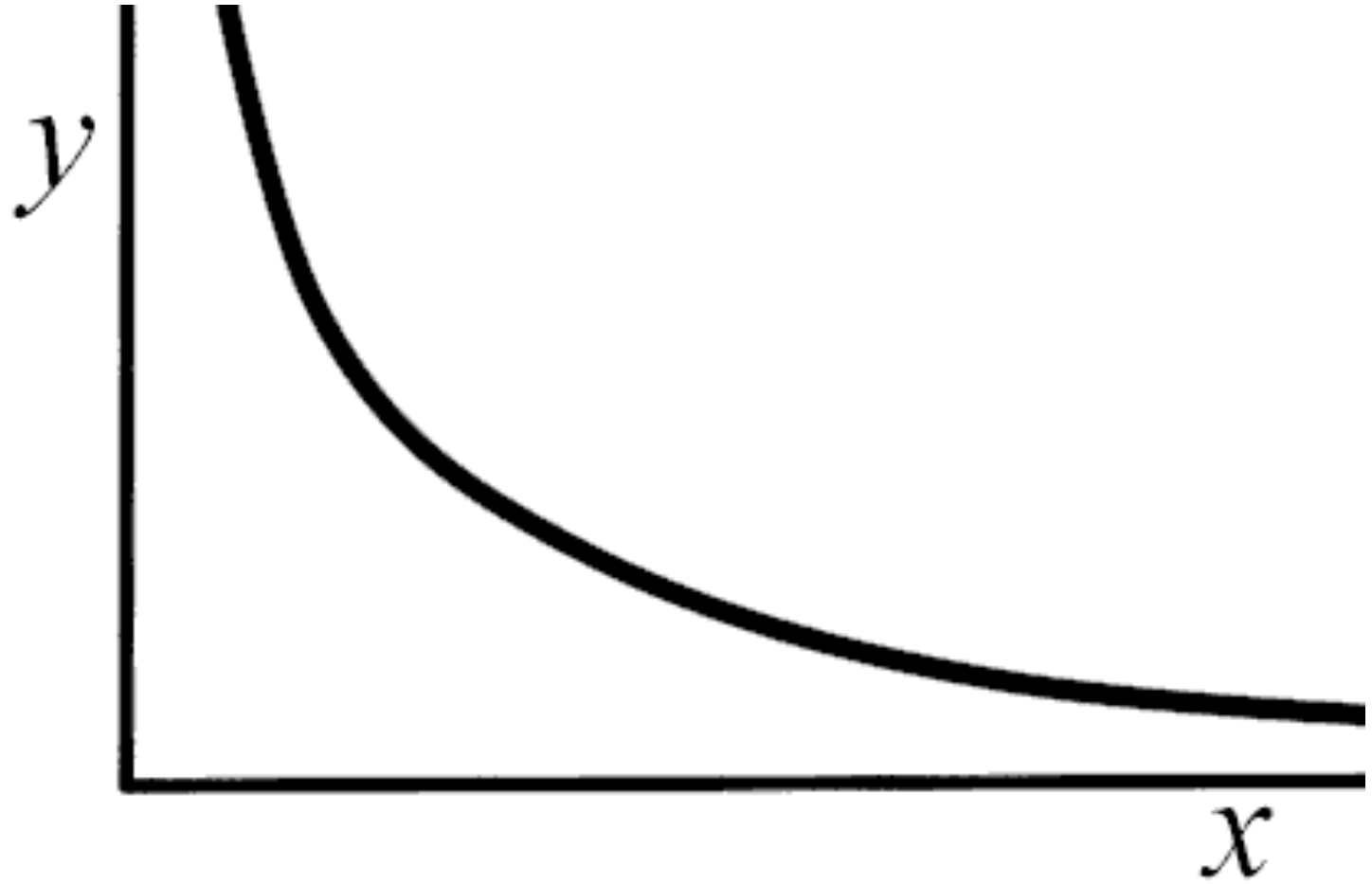
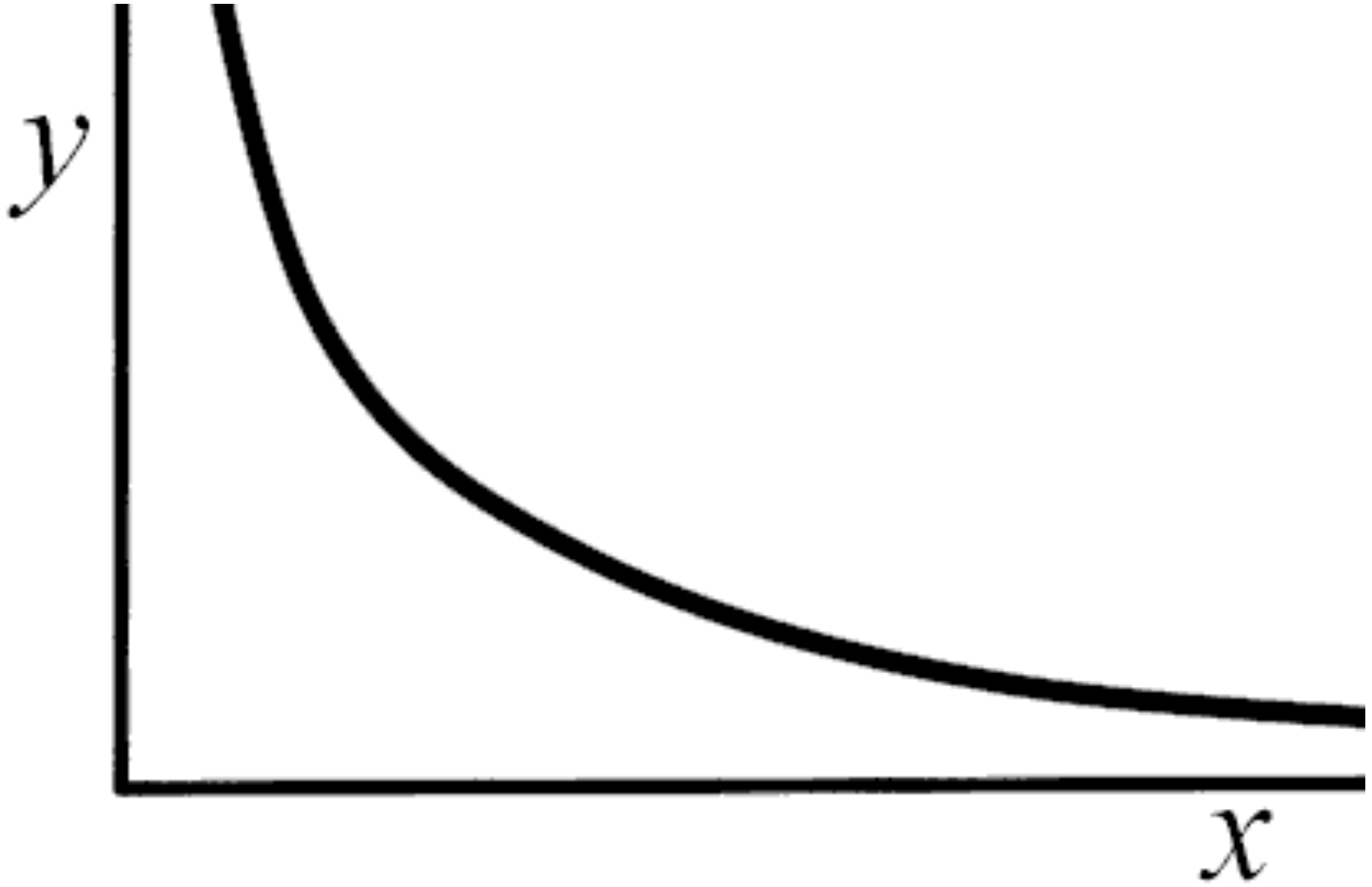

y
x

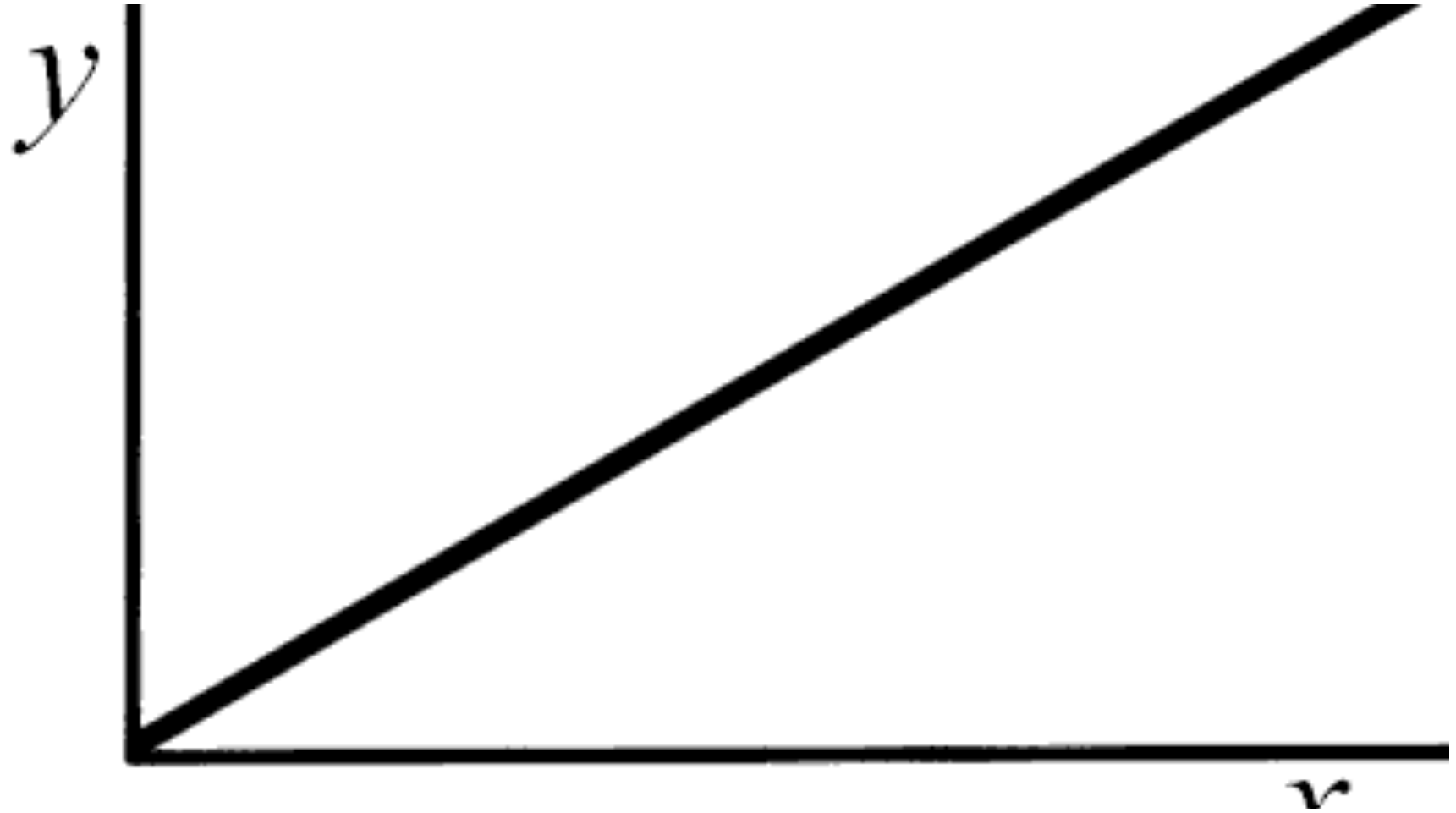
Inverse Proportion



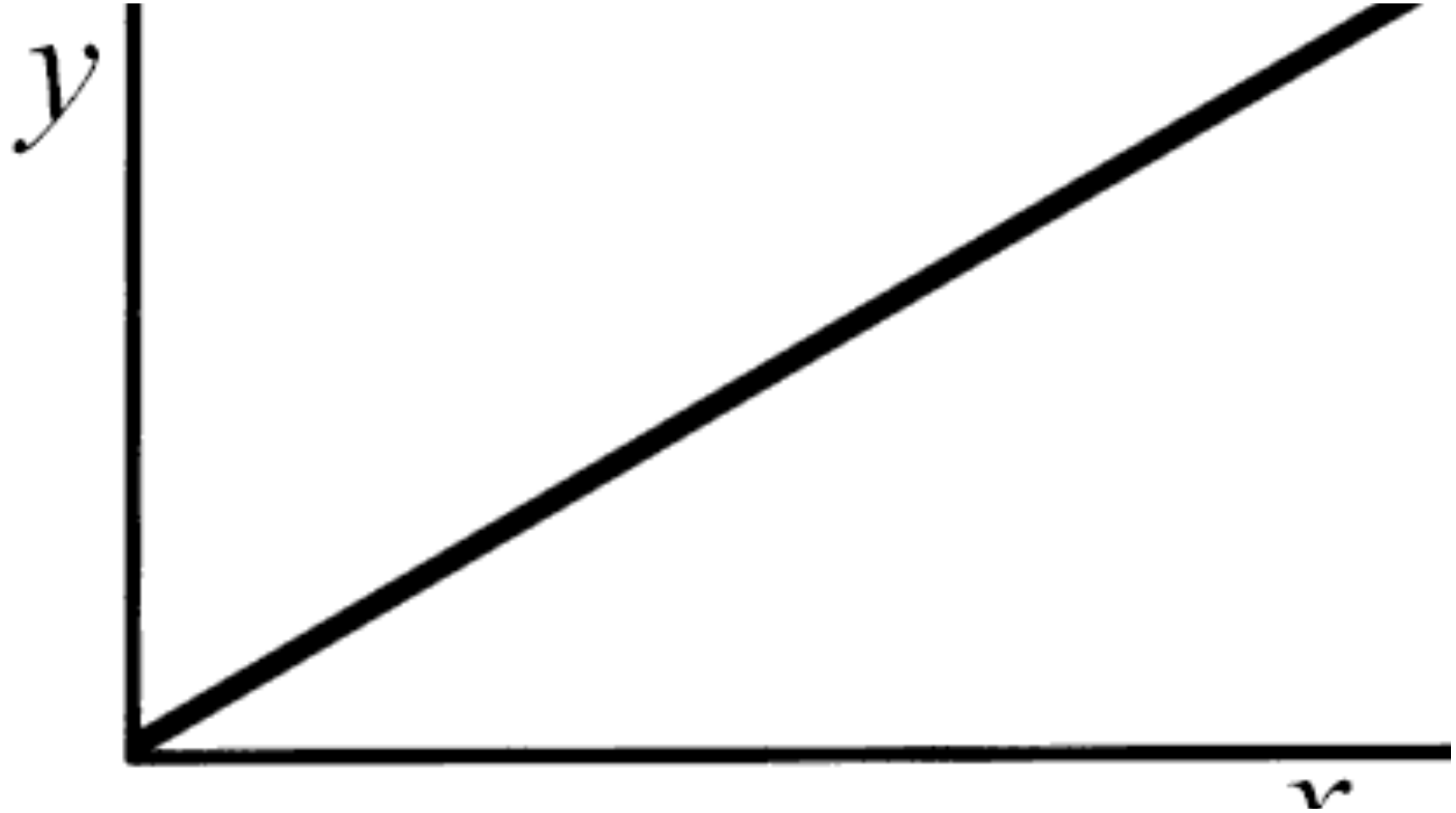
Metric unit to measure the length of a shoe

Metric unit to measure the length of a shoe

cm


y
x

Direct Proportion



Which factor is important to specify when measuring density?

A) Temperature
B) Length
C) Weight

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A) Temperature

Which observation is quantitative?

A) The brick is red
B) The gas is odorous
C) Water freezes at 273 K

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Which unit does not indicate density?

A) g/mm^3
B) kg/L
C) g/cm^3
D) kg/m^2

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Name the SI unit for mass

Hint: not the metric base unit

Name the SI unit for mass

kg

Calculate

Find the volume of a substance with a density of 5 g/cm^3 and a mass of 75 g.

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$V = 15\ cm^3$

A sample of copper has a mass of 84 g and a volume of 12 mL. What is the density of the sample?

A) 7 g/mL
B) 8.0 g/mL
C) 6.5 g/mL
D) 7.0 g/mL

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Convert 7.96 L to mL

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7960 mL

Round 0.0074567 to 2 Sig Figs

Round 0.0074500 to 2 Sig Figs

0.0074

Round 1.3894×10^{-9} to 3 Sig Figs

Round 1.3894×10^{-9} to 3 Sig Figs

1.39×10^{-9}

Write 953 000 000 in scientific notation.

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9.53×10^{8}

The result of dividing 10^{-8} by 10^{4} is…

The result of dividing 10^{-8} by 10^{4} is…

10^{-12}

The result of multiplying 10^{8} by 10^{-4} is…

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10^{4}

Which number has only non-significant zeros?

A) 0.00078

B) 7.800

C) 0.007800

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B) 7.800

C) 0.007800