

Pre-Algebra & Geometry

Word Problems Worksheet · 20 Questions

Topics: Rates · Percentages · Ratios · Equations · Proportions | Perimeter · Area · Circles · Pythagorean Theorem · Volume

Name: _____

Date: _____

Score: _____ / 20

◆ PART 1 — PRE-ALGEBRA WORD PROBLEMS (Q1 – Q10)

Q1. [Rates & Unit Price]

★ *UNIT PRICE = Total Cost divided by Number of Items*

Sarah buys 8 notebooks for \$12.00. Her friend buys 5 notebooks for \$8.50. Who gets the better deal (lower price per notebook)?

- A) Sarah — \$1.50 each
B) Her friend — \$1.70 each
C) Sarah, at \$1.50 each (better deal)
D) They pay the same price

Q2. [Percentages — Finding a Part]

★ *PART = Percent x Whole (convert % to decimal first: divide by 100)*

A school store has 200 pencils. During the first week, 35% were sold. How many pencils were sold in the first week?

- A) 35 pencils
B) 65 pencils
C) 70 pencils
D) 130 pencils

Q3. [Ratios — Scaling Recipes]

★ *RATIO: multiply ALL amounts by the same scale factor*

A cookie recipe for 12 cookies needs 3 cups of flour. Jake wants to make 36 cookies. How many cups of flour does he need?

- A) 6 cups
B) 9 cups
C) 12 cups
D) 15 cups

Q4. [Integer Operations — Temperature]

★ *CHANGE = Final minus Starting | subtracting a negative = adding*

At 6 AM, the temperature was -8 degrees F. By noon, it rose to 15 degrees F. By how many degrees did the temperature increase?

- A) 7 degrees F
B) 17 degrees F
C) 23 degrees F
D) -23 degrees F

Q5. [Equations — Word Problem Setup]

★ *Let x = unknown. Write equation from words. Solve step by step.*

Emma thinks of a number, multiplies it by 4, then subtracts 6, and gets 22. What is Emma's number?

A) $x = 4$

B) $x = 5$

C) $x = 7$

D) $x = 14$

Q6. [Proportions — Map Scale]

★ *MAP SCALE: multiply map distance by the scale factor*

On a map, 1 inch = 30 miles. Two cities are 4.5 inches apart on the map. What is the actual distance between the two cities?

A) 34.5 miles

B) 120 miles

C) 135 miles

D) 150 miles

Q7. [Percentages — Discount & Sale Price]

★ *SALE PRICE = Original \times (1 - discount rate) OR Original minus discount*

A pair of shoes costs \$64. The store offers a 25% discount. What is the sale price of the shoes?

A) \$16

B) \$40

C) \$48

D) \$60

Q8. [Expressions — Total Cost]

★ *FIXED FEE + (rate \times quantity) = total cost expression*

A gym charges a \$20 sign-up fee plus \$15 per month. How much has a member paid in total after 6 months?

A) \$90

B) \$110

C) \$100

D) \$115

Q9. [Fractions — Parts of a Whole]

★ *FRACTION of total: multiply fraction by whole. Remainder = total minus all parts.*

A class has 30 students. $\frac{2}{5}$ are in the school band, and $\frac{1}{3}$ are on a sports team. No student is in both groups. How many students are in neither?

A) 4 students

B) 6 students

C) 8 students

D) 10 students

Q10. [Multi-Step — Saving Money]

★ *MULTI-STEP: solve ONE step at a time — earnings first, then subtract costs*

Tom earns \$9 per hour mowing lawns. He worked 8 hours this week and spent \$24 on supplies.
How much money does Tom have left?

A) \$48

B) \$72

C) \$56

D) \$33

ANSWER KEY

Review each wrong answer. Re-read the Memory Key (★) for that question.

Pre-Algebra	Q1: C	Q2: C	Q3: B	Q4: C	Q5: C
	Q6: C	Q7: C	Q8: B	Q9: C	Q10: A
Geometry	Q11: C	Q12: C	Q13: B	Q14: C	Q15: B
	Q16: C	Q17: B	Q18: C	Q19: B	Q20: A