Math Word Problems

Practice Set · Pre-Algebra & Geometry · 20 Questions

Name: _____ Date: _____

SECTION 1 · PRE-ALGEBRA

KEY WORDS PEMDAS: Parentheses · Exponents · Multiply · Divide · Add · Subtract TRANSLATE: 'more than'=+ | 'less than'=- | 'times'=x | 'quotient'=÷ PERCENT: IS ÷ OF × 100 | PROPORTION: a/b = c/d → cross-multiply (ad=bc) RATE: find unit rate first, then multiply | EQUATION: balance both sides

Q1 · VARIABLES & EQUATIONS

Emma has 3 times as many stickers as Jake. Together they have 48 stickers. How many stickers does Jake have?

A) 8 stickers
B) 12 stickers
C) 16 stickers
D) 36 stickers

Q2 · RATIOS & PROPORTIONS

A recipe uses 2 cups of flour for every 3 cups of oats. If you use 9 cups of oats, how many cups of flour do you need?

A) 4 cups
B) 5 cups
C) 6 cups
D) 8 cups

Q3 · PERCENTAGES

A jacket originally costs $80. It is on sale for 25% off. What is the sale price?

A) $20
B) $55
C) $60
D) $75

Q4 · INTEGER OPERATIONS

Temperature at midnight was -8 degrees F. By noon it rose 15 degrees F, then dropped 4 degrees F by evening. What is the evening temperature?

A) -3 degrees F
B) 3 degrees F
C) 7 degrees F
D) 11 degrees F

Q5 · ORDER OF OPERATIONS (PEMDAS)

Evaluate: 3 + 4 x (6 - 2)^2 / 8

A) 6.5
B) 8
C) 11
D) 27

Q6 · RATE & UNIT RATE

A car travels 252 miles in 4 hours. At the same speed, how far will it travel in 7 hours?

A) 378 miles
B) 420 miles
C) 441 miles
D) 504 miles

Q7 · INEQUALITIES

Marcus earns $12 per hour. He wants to save at least $150. What is the minimum whole number of hours he must work?

A) 12 hours
B) 13 hours
C) 14 hours
D) 15 hours

Q8 · FRACTIONS

A pizza is cut into 8 equal slices. Tom eats 3 slices; Sara eats 1/4 of the whole pizza. What fraction of the pizza remains?

A) 1/8
B) 3/8
C) 5/8
D) 3/4

Q9 · ALGEBRAIC EXPRESSIONS

A store charges $5 per book plus a flat $3 shipping fee. Which expression gives the total cost for n books?

A) 5 + 3n
B) 5n - 3
C) 5n + 3
D) 8n

Q10 · TWO-VARIABLE PROBLEM

A class has 30 students. The number of girls is 6 more than the number of boys. How many boys are in the class?

A) 10 boys
B) 12 boys
C) 14 boys
D) 18 boys

SECTION 2 · GEOMETRY

KEY WORDS	PERIMETER: add all outer sides | AREA: surface inside shape RECTANGLE A=l×w | TRIANGLE A=1/2×b×h | CIRCLE A=pi×r^2 PYTHAGOREAN: a^2+b^2=c^2 (right triangle; c = hypotenuse = longest side) SUPPLEMENTARY=180° (Straight) | COMPLEMENTARY=90° (Corner) SIMILAR: multiply ALL sides by scale factor | VOLUME (box): l×w×h

Q11 · PERIMETER VS. AREA

A rectangle has length 14 cm and width 9 cm. What is the difference between its area and its perimeter?

A) 20
B) 46
C) 80
D) 172

Q12 · TRIANGLE AREA

A triangular garden has a base of 18 m and a height of 10 m. What is the area of the garden?

A) 45 m^2
B) 90 m^2
C) 180 m^2
D) 280 m^2

Q13 · PYTHAGOREAN THEOREM

A 13-foot ladder leans against a wall. The base is 5 feet from the wall. How high up the wall does the ladder reach?

A) 8 ft
B) 10 ft
C) 12 ft
D) 18 ft

Q14 · CIRCLE — AREA

A circular pool has a diameter of 10 m. What is the approximate area? (Use pi = 3.14)

A) 31.4 m^2
B) 78.5 m^2
C) 157 m^2
D) 314 m^2

Q15 · SUPPLEMENTARY ANGLES

Two angles are supplementary. One measures 47 degrees. What is the measure of the other angle?

A) 43 degrees
B) 53 degrees
C) 113 degrees
D) 133 degrees

Q16 · VOLUME — RECTANGULAR PRISM

A fish tank is 60 cm long, 30 cm wide, and 40 cm tall. What is the volume of the tank?

A) 1,800 cm^3
B) 7,200 cm^3
C) 72,000 cm^3
D) 2,400 cm^3

Q17 · ANGLES IN A TRIANGLE

A triangle has angles measuring 55 degrees and 72 degrees. What is the third angle?

A) 43 degrees
B) 53 degrees
C) 63 degrees
D) 127 degrees

Q18 · SIMILAR FIGURES

Smaller rectangle: 4 cm x 6 cm. Larger similar rectangle has width 10 cm. What is the length of the larger rectangle?

A) 8 cm
B) 12 cm
C) 15 cm
D) 24 cm

Q19 · COORDINATE DISTANCE

What is the distance between points (1, 2) and (4, 6)?

A) 3 units
B) 4 units
C) 5 units
D) 7 units

Q20 · COMPOSITE SHAPES

An L-shaped figure is made from two rectangles: one 8 m x 3 m, and one 4 m x 5 m. What is the total area?

A) 24 m^2
B) 44 m^2
C) 60 m^2
D) 74 m^2

ANSWER KEY

Q01	B	Q02	C	Q03	C	Q04	B
Q05	C	Q06	C	Q07	B	Q08	B
Q09	C	Q10	B	Q11	C	Q12	B
Q13	C	Q14	B	Q15	D	Q16	C
Q17	B	Q18	C	Q19	C	Q20	B