CAASPP Math Practice

20 Essential Problems — Print & Study Edition

Student Name: _____ **Date:** _____

Grade Level: _____ **Period:** _____

Score: _____ / 100 **Time:** _____

Topics Covered

#1 Ratios & Proportions (6th)	#2 Percent Problems (7th)	#3 Integer Operations (6th)	#4 Linear Equations (8th)
#5 Slope & Linear Graphs (8th)	#6 Systems of Equations (8th)	#7 Exponents & Scientific Notation (8th)	#8 Geometry: Area & Perimeter (6th)
#9 Pythagorean Theorem (8th)	#10 Statistics: Mean / Median / Mode (6th)	#11 Probability (7th)	#12 Fractions & Decimals (6th)
#13 Inequalities (7th)	#14 Functions (8th)	#15 Volume & Surface Area (7th)	#16 Algebraic Expressions (6th)
#17 Rates & Unit Conversions (7th)	#18 Data Analysis & Box Plots (6th)	#19 Transformations (8th)	#20 Word Problems (Mixed) (7-8th)

Instructions: Each problem has 3 steps. Show your work in the space provided. Write your answer choice clearly. All 3 steps must be correct for full credit.

Problem 1 | Ratios & Proportions

Grade: 6th

■ **Key Concept**

Ratio compares two quantities. Proportion: a/b = c/d → cross multiply: a×d = b×c

Formula: a/b = c/d → a × d = b × c

Ex: 3 apples cost $2.10 → 7 apples? → 3x = 7×2.10 → x = $4.90

Step 1 of 3

A car travels 150 miles in 3 hours. How many miles in 5 hours?

A) 200 miles
B) 250 miles
C) 300 miles
D) 175 miles

My Answer: _____ **Show Your Work:**

Explanation: Speed=50mph. 50×5=250 miles.

Step 2 of 3

4 pounds of apples cost $6.00. How much do 10 pounds cost?

A) $12.00
B) $14.00
C) $15.00
D) $16.00

My Answer: _____ **Show Your Work:**

Explanation: $6÷4=$1.50/lb. 10×$1.50=$15.00

Step 3 of 3

Map scale: 1 inch = 25 miles. Two cities 3.6 inches apart. Actual distance?

A) 80 miles
B) 85 miles
C) 90 miles
D) 95 miles

My Answer: _____ **Show Your Work:**

Explanation: 3.6×25=90 miles.

■ **All 3 steps correct = Full Credit for Problem 1**

Problem 2 | Percent Problems

Grade: 7th

■ **Key Concept**

Part = Percent × Whole | Percent = Part ÷ Whole × 100 | Whole = Part ÷ Percent

Formula: Part = % × Whole | % = Part ÷ Whole × 100

Ex: 30% of 80 = 0.30×80 = 24 | What % is 18 of 72? → 18÷72×100 = 25%

Step 1 of 3

A shirt costs $45. Sale: 20% off. What is the sale price?

A) $25 B) $36

C) $38 D) $40

My Answer: _____ **Show Your Work:**

Explanation: Discount=20%×45=$9. Sale=$45-$9=$36.

Step 2 of 3

A student scored 34 out of 40. What percent did she score?

A) 80% B) 82%

C) 85% D) 88%

My Answer: _____ **Show Your Work:**

Explanation: 34÷40×100=85%.

Step 3 of 3

After 15% increase, price = $92. What was original price?

A) $78.26 B) $80.00

C) $82.50 D) $83.00

My Answer: _____ **Show Your Work:**

Explanation: Original×1.15=92 → Original=92÷1.15=$80.00

■ **All 3 steps correct = Full Credit for Problem 2**

Problem 3 | Integer Operations

Grade: 6th

■ **Key Concept**

(-)×(-) = (+) | (+)×(-) = (-) | Keep-Change-Change for subtraction

Formula: (-) × (-) = (+) | a - (-b) = a + b

Ex: -8+5=-3 | -4-(-9)=-4+9=5 | -3×(-4)=12

Step 1 of 3

Evaluate: -3 × (-4) + (-6) ÷ 2

A) 9 B) 6

C) -9 D) 15

My Answer: _____ **Show Your Work:**

Explanation: -3×(-4)=12. (-6)÷2=-3. 12+(-3)=9.

Step 2 of 3

Temp was -8°F. Dropped 5°, then rose 12°. Final temperature?

A) -1°F B) 0°F

C) -9°F D) 1°F

My Answer: _____ **Show Your Work:**

Explanation: -8-5=-13. -13+12=-1°F.

Step 3 of 3

Which expression has the GREATEST value? A)-5+(-3) B)-2×4 C)14÷(-7) D)-1×(-8)

A) -8 B) -8

C) -2 D) 8

My Answer: _____ **Show Your Work:**

Explanation: D=-1×(-8)=8. Largest.

■ **All 3 steps correct = Full Credit for Problem 3**

Problem 4 | Linear Equations

Grade: 8th

■ **Key Concept**

Isolate the variable using inverse operations. Do same thing to both sides.

Formula: ax + b = c → x = (c - b) ÷ a

Ex: 3x-7=11 → 3x=18 → x=6

Step 1 of 3

Solve for x: 2x + 9 = 25

A) x=7 B) x=8

C) x=9 D) x=6

My Answer: _____ **Show Your Work:**

Explanation: 2x=25-9=16. x=8.

Step 2 of 3

Solve for x: 4(x - 3) = 20

A) x=5 B) x=7

C) x=8 D) x=4

My Answer: _____ **Show Your Work:**

Explanation: 4x-12=20. 4x=32. x=8.

Step 3 of 3

Solve for x: (2x + 4) / 3 = 8

A) x=10 B) x=12

C) x=14 D) x=16

My Answer: _____ **Show Your Work:**

Explanation: 2x+4=24. 2x=20. x=10.

■ **All 3 steps correct = Full Credit for Problem 4**

Problem 5 | Slope & Linear Graphs

Grade: 8th

■ **Key Concept**

Slope = rise/run = (y2-y1)/(x2-x1). Slope-intercept: y = mx + b

`Formula: m = (y2-y1) / (x2-x1) | y = mx + b`

Ex: Through (1,3) and (4,9): m=(9-3)/(4-1)=2. y=2x+1.

Step 1 of 3

Slope of line through (2,5) and (6,13)?

A) 1 B) 2

C) 3 D) 4

My Answer: _____ **Show Your Work:**

Explanation: m=(13-5)/(6-2)=8/4=2.

Step 2 of 3

Slope=3, passes through (0,-4). Which equation?

A) y=3x+4 B) y=-4x+3

C) y=3x-4 D) y=-3x+4

My Answer: _____ **Show Your Work:**

Explanation: y=3x-4 (m=3, b=-4).

Step 3 of 3

Line through (-1,2) and (3,-6). What is the y-intercept?

A) b=-2 B) b=0

C) b=1 D) b=-1

My Answer: _____ **Show Your Work:**

Explanation: m=(-6-2)/4=-2. Using (-1,2): 2=2+b → b=0.

■ **All 3 steps correct = Full Credit for Problem 5**

Problem 6 | Systems of Equations

Grade: 8th

■ **Key Concept**

Substitution: solve one equation for a variable, substitute into other. Elimination: add/subtract to cancel a variable.

Formula: Substitution or Elimination methods

Ex: y=x+2 and y=3x-4 → x+2=3x-4 → x=3, y=5

Step 1 of 3

Solve: y=x+2 and y=3x-4. What is (x,y)?

A) (2,4) B) (3,5)

C) (1,3) D) (4,8)

My Answer: _____ **Show Your Work:**

Explanation: x+2=3x-4 → 6=2x → x=3,y=5.

Step 2 of 3

Solve: x+y=10 and x-y=4. Find x.

A) x=5 B) x=6

C) x=7 D) x=8

My Answer: _____ **Show Your Work:**

Explanation: Add: 2x=14. x=7.

Step 3 of 3

Two numbers: sum=50, difference=14. Larger number?

A) 28 B) 30

C) 32 D) 34

My Answer: _____ **Show Your Work:**

Explanation: x+y=50, x-y=14. 2x=64. x=32.

■ **All 3 steps correct = Full Credit for Problem 6**

Problem 7 | Exponents & Scientific Notation

Grade: 8th

■ **Key Concept**

a^m × a^n = a^(m+n) | a^m ÷ a^n = a^(m-n) | Scientific: a × 10^n (1 ≤ a < 10)

Formula: a^m × a^n = a^(m+n) | a × 10^n

Ex: 4,500,000 = 4.5×10^6 | 0.00032 = 3.2×10^(-4)

Step 1 of 3

Simplify: 3^2 × 3^4

A) 3^6 B) 3^8

C) 9^6 D) 3^5

My Answer: _____ **Show Your Work:**

Explanation: Same base: add exponents. 3^(2+4)=3^6.

Step 2 of 3

Which equals 2.7 × 10^(-3)?

A) 2700 B) 0.27

C) 0.0027 D) 0.00027

My Answer: _____ **Show Your Work:**

Explanation: Move decimal 3 places left: 0.0027.

Step 3 of 3

(3 × 10^4) × (2 × 10^3) = ? (scientific notation)

A) 6×10^7 B) 6×10^12

C) 5×10^7 D) 6×10^6

My Answer: _____ **Show Your Work:**

Explanation: 3×2=6. 10^4×10^3=10^7. Answer: 6×10^7.

■ **All 3 steps correct = Full Credit for Problem 7**

Problem 8 | Geometry: Area & Perimeter

Grade: 6th

■ **Key Concept**

Rectangle: A=lw, P=2(l+w) | Triangle: A=1/2×b×h | Circle: A=pi×r^2, C=2pi×r

Formula: Rectangle: A=lw | Triangle: A=½bh | Circle: A=πr² | Trapezoid: A=½(b1+b2)h

Ex: Triangle base=8, height=5 → A=½×8×5=20 sq units

Step 1 of 3

Rectangle: length=12cm, width=7cm. Area?

A) 38cm²
B) 74cm²
C) 84cm²
D) 92cm²

My Answer: _____ **Show Your Work:**

Explanation: A=12×7=84cm².

Step 2 of 3

Circle radius=5cm. Area? (pi≈3.14)

A) 15.7cm²
B) 31.4cm²
C) 78.5cm²
D) 314cm²

My Answer: _____ **Show Your Work:**

Explanation: A=3.14×25=78.5cm².

Step 3 of 3

Trapezoid: bases=6m and 10m, height=4m. Area?

A) 28m²
B) 32m²
C) 36m²
D) 40m²

My Answer: _____ **Show Your Work:**

Explanation: A=½(6+10)×4=32m².

■ **All 3 steps correct = Full Credit for Problem 8**

Problem 9 | Pythagorean Theorem

Grade: 8th

■ **Key Concept**

In a right triangle: a^2 + b^2 = c^2 where c is the hypotenuse (longest side).

Formula: $a^2 + b^2 = c^2$ (c = hypotenuse)

Ex: legs=3,4 → 9+16=25 → c=5 | legs=5,hyp=13 → b^2=144 → b=12

Step 1 of 3

Right triangle: legs=6 and 8. Hypotenuse?

A) 9 B) 10

C) 12 D) 14

My Answer: _____ **Show Your Work:**

Explanation: 36+64=100. √100=10.

Step 2 of 3

Ladder 17ft, base 8ft from wall. How high up the wall?

A) 12ft B) 15ft

C) 16ft D) 13ft

My Answer: _____ **Show Your Work:**

Explanation: h^2=289-64=225. h=15ft.

Step 3 of 3

Is triangle with sides 9, 12, 15 a right triangle?

A) Yes, $9^2+12^2=15^2$ B) No

C) Not enough info D) Yes, by other reason

My Answer: _____ **Show Your Work:**

Explanation: 81+144=225=15^2. Yes!

■ **All 3 steps correct = Full Credit for Problem 9**

Problem 10 | Statistics: Mean / Median / Mode

Grade: 6th

■ **Key Concept**

Mean=sum÷count | Median=middle value (sorted) | Mode=most frequent | Range=max-min

Formula: Mean = sum ÷ count | Median = middle (sorted) | Range = max − min

Ex: 4,7,7,9,13 → Mean=8, Median=7, Mode=7, Range=9

Step 1 of 3

Find the MEAN of: 15, 20, 25, 30, 10

A) 18 B) 20

C) 22 D) 25

My Answer: _____ **Show Your Work:**

Explanation: Sum=100. 100÷5=20.

Step 2 of 3

Find MEDIAN of: 3, 7, 12, 5, 9, 1, 8

A) 5 B) 7

C) 8 D) 9

My Answer: _____ **Show Your Work:**

Explanation: Sorted: 1,3,5,7,8,9,12. Middle=7.

Step 3 of 3

Scores: 72,85,91,85,77. What 6th score raises mean to 83?

A) 88 B) 90

C) 86 D) 92

My Answer: _____ **Show Your Work:**

Explanation: Need 83×6=498. Sum=410. Missing=88.

■ **All 3 steps correct = Full Credit for Problem 10**

Problem 11 | Probability

Grade: 7th

■ **Key Concept**

P(event) = favorable/total | P(A and B) = P(A)×P(B) for independent events

Formula: P(event) = favorable outcomes / total outcomes

Ex: P(even on die)=3/6=1/2 | P(both heads on 2 coins)=1/4

Step 1 of 3

Bag: 4 red, 3 blue, 5 green marbles. P(picking blue)?

A) 1/4 B) 1/3

C) 1/5 D) 3/8

My Answer: _____ **Show Your Work:**

Explanation: P=3/12=1/4.

Step 2 of 3

Fair coin flipped 3 times. P(all tails)?

A) 1/2 B) 1/4

C) 1/6 D) 1/8

My Answer: _____ **Show Your Work:**

Explanation: 1/2×1/2×1/2=1/8.

Step 3 of 3

Class: 12 boys, 8 girls. P(1st=boy, 2nd=girl) without replacement?

A) 96/380 B) 8/25

C) 12/50 D) 12/25

My Answer: _____ **Show Your Work:**

Explanation: 12/20×8/19=96/380.

■ **All 3 steps correct = Full Credit for Problem 11**

Problem 12 | Fractions & Decimals

Grade: 6th

■ **Key Concept**

Add/Sub: common denominator | Multiply: top×top, bottom×bottom | Divide: multiply by reciprocal (flip!)

`Formula: a/b ÷ c/d = a/b × d/c | LCD for addition/subtraction`

Ex: 3/4 ÷ 1/2 = 3/4 × 2/1 = 3/2 | 2/3+3/4 = 8/12+9/12 = 17/12

Step 1 of 3

Calculate: 2/3 × 3/4

A) 5/7 B) 6/7

C) 1/2 D) 2/3

My Answer: _____ **Show Your Work:**

Explanation: 2×3=6, 3×4=12. 6/12=1/2.

Step 2 of 3

Which fraction is LARGEST? 3/4, 5/6, 7/9, 11/12

A) 3/4=0.750 B) 5/6=0.833

C) 7/9=0.778 D) 11/12=0.917

My Answer: _____ **Show Your Work:**

Explanation: 11/12≈0.917 is largest.

Step 3 of 3

Recipe needs 2 1/3 cups. Make 1.5× recipe. Cups needed?

A) 3 cups B) 3½ cups

C) 3 2/3 cups D) 4 cups

My Answer: _____ **Show Your Work:**

Explanation: 7/3 × 3/2 = 21/6 = 3.5 = 3½.

■ **All 3 steps correct = Full Credit for Problem 12**

Problem 13 | Inequalities

Grade: 7th

■ **Key Concept**

Same as equations BUT: FLIP the inequality sign when multiplying or dividing by a NEGATIVE number!

Formula: -2x > 6 → x < -3 (FLIP!) | x+5 > 8 → x > 3 (no flip)

Ex: -3x ≤ 15 → x ≥ -5 (flipped because ÷ by -3)

Step 1 of 3

Solve: x + 7 > 12

A) x>5 B) x>19

C) x>-5 D) x<5

My Answer: _____ **Show Your Work:**

Explanation: x>12-7. x>5.

Step 2 of 3

Solve: -4x ≥ 20

A) x≥-5 B) x≤-5

C) x≥5 D) x≤5

My Answer: _____ **Show Your Work:**

Explanation: Divide by -4, FLIP: x≤-5.

Step 3 of 3

Need at least 360 total pts in 5 tests. Got 68,72,71,75. Minimum last score?

A) at least 70 B) at least 74

C) at least 75 D) at least 78

My Answer: _____ **Show Your Work:**

Explanation: 286+x≥360 → x≥74.

■ **All 3 steps correct = Full Credit for Problem 13**

Problem 14 | Functions

Grade: 8th

■ **Key Concept**

A function maps each input (x) to exactly ONE output (y). Vertical line test: passes = function.

`Formula: f(x) = expression | f(3) means substitute x=3`

Ex: f(x)=2x²-3. f(4)=2(16)-3=29.

Step 1 of 3

If f(x) = 3x - 5, what is f(7)?

A) 14 B) 16

C) 18 D) 21

My Answer: _____ **Show Your Work:**

Explanation: f(7)=3(7)-5=21-5=16.

Step 2 of 3

Which set does NOT represent a function? A){(1,2),(3,4),(5,6)} B){(1,2),(1,3),(2,5)} C){(2,4),(3,4)} D){(0,0),(1,1)}

A) Set A B) Set B (x=1→2 values)

C) Set C D) Set D

My Answer: _____ **Show Your Work:**

Explanation: Set B: x=1 maps to y=2 AND y=3. Not a function!

Step 3 of 3

g(x) = x² + 2x. Find g(-3).

A) 15 B) 3

C) -3 D) 9

My Answer: _____ **Show Your Work:**

Explanation: (-3)²+2(-3)=9-6=3.

■ **All 3 steps correct = Full Credit for Problem 14**

Problem 15 | Volume & Surface Area

Grade: 7th

■ **Key Concept**

Rectangular Prism: V=lwh, SA=2(lw+lh+wh) | Cylinder: V=pi×r²h | Cone: V=1/3 pi×r²h

Formula: V(prism)=lwh | V(cylinder)=πr²h | V(cone)=■πr²h | V(sphere)=4/3πr³

Ex: Box 4×3×5 → V=60, SA=2(12+20+15)=94

Step 1 of 3

Cylinder: radius=3, height=7. Volume? (pi≈3.14)

A) 65.94

B) 131.88

C) 197.82

D) 263.76

My Answer: _____ **Show Your Work:**

Explanation: V=3.14×9×7=197.82.

Step 2 of 3

Box: 8cm × 5cm × 3cm. Surface area?

A) 79cm²

B) 158cm²

C) 120cm²

D) 240cm²

My Answer: _____ **Show Your Work:**

Explanation: SA=2(40+24+15)=158cm².

Step 3 of 3

Cone: radius=6cm, height=8cm. Volume? (pi≈3.14)

A) 150.72cm³

B) 301.44cm³

C) 602.88cm³

D) 200.96cm³

My Answer: _____ **Show Your Work:**

Explanation: V=1/3×3.14×36×8=301.44cm³.

■ **All 3 steps correct = Full Credit for Problem 15**

Problem 16 | Algebraic Expressions

Grade: 6th

■ **Key Concept**

Like terms: same variable AND same exponent. Combine by adding/subtracting coefficients.

Formula: 3x + 5x = 8x | 3x + 5x² → CANNOT combine (different exponents)

Ex: $4x^2-3x+7+2x^2+5x-1 = 6x^2+2x+6$

Step 1 of 3

Simplify: 5a + 3b - 2a + 7b

A) 3a+10b

B) 7a+10b

C) 3a-10b

D) 10a+10b

My Answer: _____ **Show Your Work:**

Explanation: (5-2)a+(3+7)b=3a+10b.

Step 2 of 3

Expand and simplify: 3(2x-4) + 5x

A) 11x-4

B) 11x-12

C) 6x-12

D) 11x+12

My Answer: _____ **Show Your Work:**

Explanation: 6x-12+5x=11x-12.

Step 3 of 3

Which is equivalent to: 2(3x+5) - 4(x-1)?

A) 2x+14

B) 2x+6

C) 10x+14

D) 2x-6

My Answer: _____ **Show Your Work:**

Explanation: 6x+10-4x+4=2x+14.

■ **All 3 steps correct = Full Credit for Problem 16**

Problem 17 | Rates & Unit Conversions

Grade: 7th

■ **Key Concept**

Unit rate = total ÷ units. For area conversions, square the linear conversion factor.

Formula: Unit Rate = Total ÷ Number of Units | Area: 1m² = 10,000cm²

Ex: 180 miles / 3 hours = 60 mph | 5 feet = 60 inches

Step 1 of 3

Store A: 8 bottles/$6.40. Store B: 12 bottles/$9.00. Which cheaper per bottle?

A) Store A ($0.80)
B) Store B ($0.75)
C) Same
D) Can't tell

My Answer: _____ **Show Your Work:**

Explanation: A=$0.80/bottle. B=$0.75/bottle. B cheaper.

Step 2 of 3

Car: 35mpg, gas=$3.80/gal. Cost of 245-mile trip?

A) $24.70
B) $26.60
C) $28.50
D) $31.20

My Answer: _____ **Show Your Work:**

Explanation: 245÷35=7 gallons. 7×$3.80=$26.60.

Step 3 of 3

Convert 3.5 square meters to square centimeters. (1m=100cm)

A) 350cm²
B) 3,500cm²
C) 35,000cm²
D) 350,000cm²

My Answer: _____ **Show Your Work:**

Explanation: 1m²=10,000cm². 3.5×10,000=35,000cm².

■ **All 3 steps correct = Full Credit for Problem 17**

Problem 18 | Data Analysis & Box Plots

Grade: 6th

■ **Key Concept**

IQR=Q3-Q1. Outlier: value < Q1-1.5×IQR or > Q3+1.5×IQR. Mean is most affected by outliers.

`Formula: IQR = Q3 - Q1 | Outlier boundary: Q1 - 1.5×IQR or Q3 + 1.5×IQR`

Ex: Dataset 2,5,7,9,12,15,18: Q1=5, Q2=9, Q3=15, IQR=10

Step 1 of 3

Data: 4,8,12,15,19,22,27,30. IQR?

A) 14 B) 17

C) 20 D) 26

My Answer: _____ **Show Your Work:**

Explanation: Q1=10, Q3=24.5. IQR≈14.

Step 2 of 3

Q1=20, Q3=35. Which value is an outlier?

A) 5 B) 12

C) 55 D) 45

My Answer: _____ **Show Your Work:**

Explanation: IQR=15. Upper fence=35+22.5=57.5. 55 is farthest from center.

Step 3 of 3

Which measure is MOST affected by an outlier?

A) Median B) Mode

C) Mean D) IQR

My Answer: _____ **Show Your Work:**

Explanation: Mean uses all values; pulled toward outliers.

■ **All 3 steps correct = Full Credit for Problem 18**

Problem 19 | Transformations

Grade: 8th

■ **Key Concept**

Translation:(x+a,y+b) | Reflect x-axis:(x,-y) | Reflect y-axis:(-x,y) | Rotate 90°CW:(y,-x)

Formula: Reflect/x-axis: (x,-y) | Reflect/y-axis: (-x,y) | 90°CW: (y,-x) | Dilate k: (kx,ky)

Ex: Reflect (3,-4) over x-axis → (3,4) | Translate (2,5) by (+3,-2) → (5,3)

Step 1 of 3

Point A(4,-3). Reflect over y-axis. New location?

A) (-4,-3)
B) (4,3)
C) (-4,3)
D) (3,-4)

My Answer: _____ **Show Your Work:**

Explanation: Negate x: (4,-3)→(-4,-3).

Step 2 of 3

Vertex B(2,5). Rotate 90° clockwise about origin. New location?

A) (-5,2)
B) (5,-2)
C) (-2,-5)
D) (5,2)

My Answer: _____ **Show Your Work:**

Explanation: 90°CW: (x,y)→(y,-x). (2,5)→(5,-2).

Step 3 of 3

Dilate by scale factor 3. Vertex was at (2,-1). New location?

A) (5,2)
B) (6,-3)
C) (2,-4)
D) (3,-1)

My Answer: _____ **Show Your Work:**

Explanation: Multiply by 3: (6,-3).

■ **All 3 steps correct = Full Credit for Problem 19**

Problem 20 | Word Problems (Mixed)

Grade: 7-8th

■ **Key Concept**

Strategy: Read → Identify → Set Up → Solve → Check

Formula: Identify unknowns → write equation → solve step by step → verify answer

Ex: Jake earns $12/hr + $50 bonus = $170 → 12h=120 → h=10 hours

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Step 1 of 3

Maria has $200. Spends 30% food, 25% transport. How much does she SAVE?

A) $80 B) $90

C) $100 D) $110

My Answer: _____ **Show Your Work:**

Explanation: Saved=45%×200=$90.

Step 2 of 3

Train A: 60mph. Train B: 80mph, leaves 1hr later same direction. How long for B to catch A?

A) 2hrs B) 3hrs

C) 4hrs D) 5hrs

My Answer: _____ **Show Your Work:**

Explanation: Gap=60mi. B gains 20mph. 60÷20=3hrs.

Step 3 of 3

Pool: 5000 gal. Fills at 80gal/min, drains at 20gal/min. Time to fill?

A) 62.5min B) 83.3min

C) 100min D) 250min

My Answer: _____ **Show Your Work:**

Explanation: Net=60gal/min. 5000÷60≈83.3min.

■ **All 3 steps correct = Full Credit for Problem 20**

Score Sheet

#	Topic	Step 1	Step 2	Step 3	Score
1	Ratios & Proportions	■ ×	■ ×	■ ×	/ 5
2	Percent Problems	■ ×	■ ×	■ ×	/ 5
3	Integer Operations	■ ×	■ ×	■ ×	/ 5
4	Linear Equations	■ ×	■ ×	■ ×	/ 5
5	Slope & Linear Graphs	■ ×	■ ×	■ ×	/ 5
6	Systems of Equations	■ ×	■ ×	■ ×	/ 5
7	Exponents & Scientific Notation	■ ×	■ ×	■ ×	/ 5
8	Geometry: Area & Perimeter	■ ×	■ ×	■ ×	/ 5
9	Pythagorean Theorem	■ ×	■ ×	■ ×	/ 5
10	Statistics: Mean / Median / Mode	■ ×	■ ×	■ ×	/ 5
11	Probability	■ ×	■ ×	■ ×	/ 5
12	Fractions & Decimals	■ ×	■ ×	■ ×	/ 5
13	Inequalities	■ ×	■ ×	■ ×	/ 5
14	Functions	■ ×	■ ×	■ ×	/ 5
15	Volume & Surface Area	■ ×	■ ×	■ ×	/ 5
16	Algebraic Expressions	■ ×	■ ×	■ ×	/ 5
17	Rates & Unit Conversions	■ ×	■ ×	■ ×	/ 5
18	Data Analysis & Box Plots	■ ×	■ ×	■ ×	/ 5
19	Transformations	■ ×	■ ×	■ ×	/ 5
20	Word Problems (Mixed)	■ ×	■ ×	■ ×	/ 5
	TOTAL				**/ 100**

Scoring: Each problem worth 5 points (all 3 steps correct). Total: 100 points.

Grade Scale: 90-100=A | 80-89=B | 70-79=C | 60-69=D | Below 60=Needs Practice