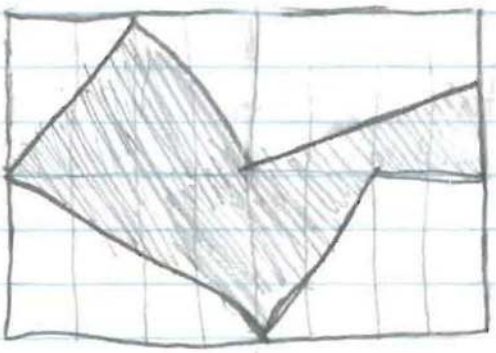
AMC-8

Geometry

1. 

each square = 1 unit^2

find area, round to nearest tenth.

$\boxed{18 \text{ units}^2}$

Algebra

If $y=3$, solve for x

2. $5x + 34 - 26 + (-2x) = y + (2^2 \cdot \sqrt{5^2}) - (6y+2) + (5 \cdot 1 \cdot 3) + (10-5)$

$3x + 8 = y + 40 - (6y+2) + 20 - (6y+2) + 15 + 5$

$3x + 8 = 3 + 40 - (6 \cdot 3 + 2) + 40 - (6y+2)$

$3x + 8 = 3 + 40 - 20 \quad 3 + 40 - 20$

$3x + 8 = 23$

$-8 \quad -8$

$\frac{3x}{3} = \frac{15}{3}$

$\boxed{x = 5}$

Combinations & Permutations

3. 10 kids, sitting in bus. How many ways can each of 10 kids sit in bus?

$10 \cdot 9 \cdot 8 \cdot 7 \cdot 6 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1 = 3628800$

$\boxed{3,628,000 \text{ combinations}}$

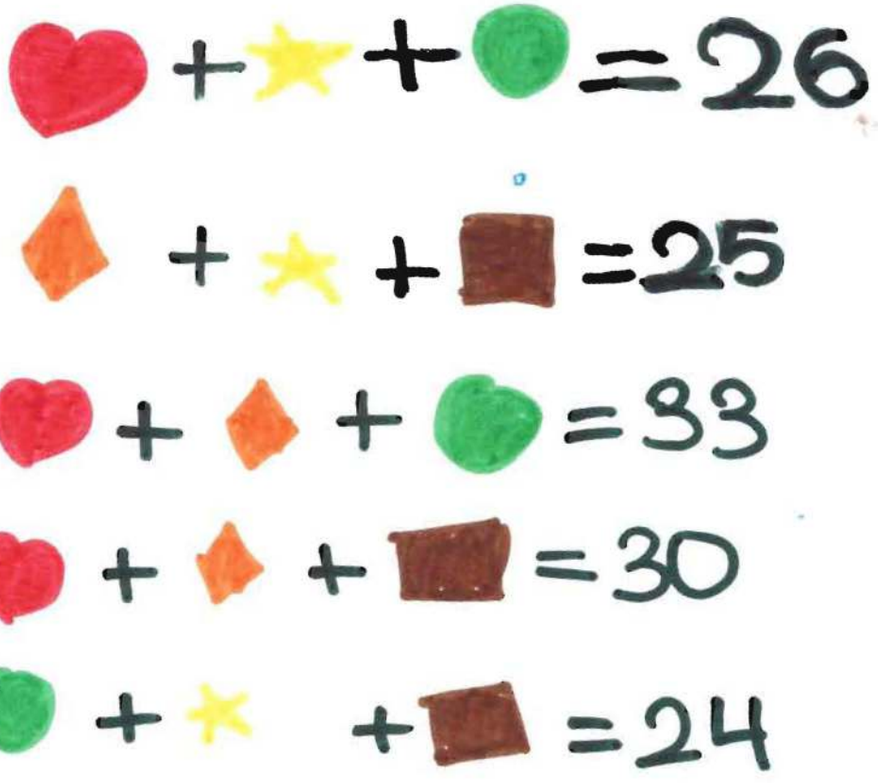
Exponents

4. $\frac{5x^2 \cdot 3x + 42}{2x - 4x^2 - 36}$ Solve

$\frac{-2x \cdot 3x + 42 + 36}{-5x^2 - 4x^2}$

$\frac{-6x + 78}{-9x^2} = \boxed{\frac{9x^2 + 78}{6x}}$

Equations:



Question: