Angeles City Science High School

Mathematics 9

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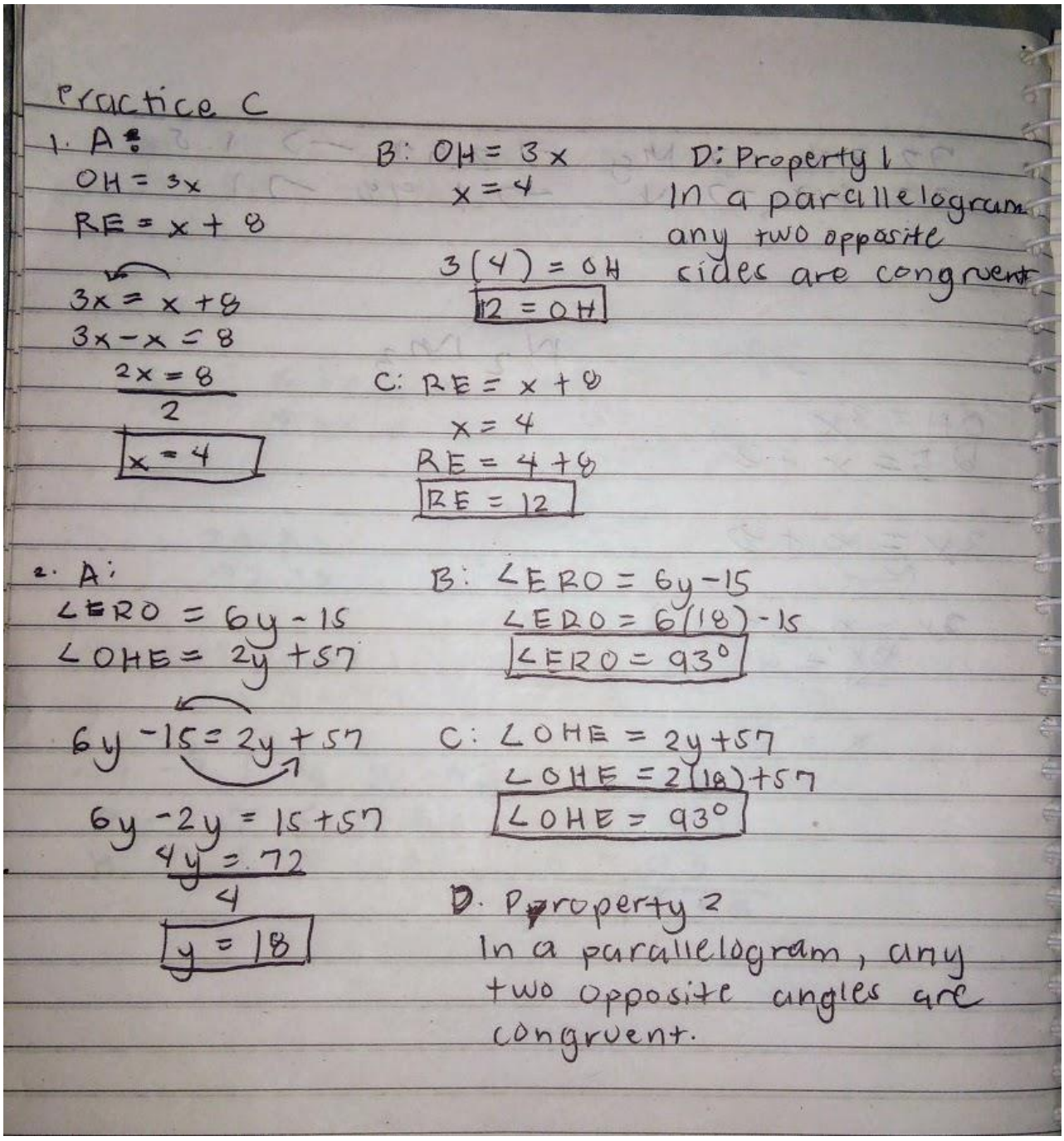

Practice C

1. A:

$OH = 3x$

$RE = x + 8$

$3x = x + 8$

$3x - x = 8$

$\frac{2x = 8}{2}$

$\boxed{x = 4}$

B: $OH = 3x$

$x = 4$

$3(4) = OH$

$\boxed{12 = OH}$

C: $RE = x + 8$

$x = 4$

$RE = 4 + 8$

$\boxed{RE = 12}$

D: Property 1

In a parallelogram any two opposite sides are congruent

2. A:

$\angle ERO = 6y - 15$

$\angle OHE = 2y + 57$

$6y - 15 = 2y + 57$

$6y - 2y = 15 + 57$

$\frac{4y = 72}{4}$

$\boxed{y = 18}$

B: $\angle ERO = 6y - 15$

$\angle ERO = 6(18) - 15$

$\boxed{\angle ERO = 93^\circ}$

C: $\angle OHE = 2y + 57$

$\angle OHE = 2(18) + 57$

$\boxed{\angle OHE = 93^\circ}$

D. Property 2

In a parallelogram, any two opposite angles are congruent.

3. A. they are supplementary angles.

B. Let:
$\angle HER = x$
$\angle OHE = 3x$

$x + 3x = 180$
$\frac{4x}{4} = \frac{180}{4}$
$x = 45$
$\boxed{\angle HER = 45°}$

C: $\angle OHE = 3x$
$\angle OHE = 3(45)$
$\boxed{\angle OHE = 135°}$

4. $HZ = 4a - 5$
$HR = 30$

A: $2(4a-5) = 30$
$8a - 10 = 30$
$\frac{8a}{8} = \frac{40}{8}$
$\boxed{a = 5}$

B: $HZ = ZR$
$a = 5$
$4a - 5 = ZR$
$4(5) - 5 = ZR$
$20 - 5 = ZR$
$15 = ZR$

5. A.
$ZO = 7x + 3$
$ZE = 2x + 18$

$7x + 3 = 2x + 18$
$7x - 2x = -3 + 18$
$\frac{5x}{5} = \frac{15}{5}$
$\boxed{x = 3}$

B.
$ZO = 7x + 3$
$ZO = 7(3) + 3$
$ZO = 21 + 3$
$\boxed{ZO = 24}$

C.
$ZO + ZE = OE$
$7x + 3 + 2x + 18 = OE$
$x = 3$
$7(3) + 3 + 2(3) + 18 = OE$
$21 + 3 + 6 + 18 = OE$
$\boxed{48 = OE}$