2.5.A Warm-Up Names Solutions, _____

Names _____, _____

Translate to an algebraic expression.

1) 46 more than t

$T + 46$

2) 19 less than d

$d - 19$

3) x subtracted from q

$q - x$

4) The sum of s and d $s + d$

5) A number plus 8 times another number $(x+8)y$

6) 43% of a number

$(0.43)x$

Pick a variable, **explain what the variable represents**, and **translate** each problem to an expression or an equation. **Do not solve**.

7) 93 minus what number is 48?

x = number

$x - 93 = 48$

8) Two more than a number is five.

x = number

$x + 2 = 5$

9) One less than twice a number is five.

x = number

$2x - 1 = 5$

10) When 16 is multiplied by a number, the result is 128. Find the number.

x = number

$16x = 128$

2.5.B Practice Names _____, _____

_____, _____

Pick a variable, explain what the variable represents, and translate each problem to an expression or an equation. **Do not solve**.

1. When 20 is subtracted from 3 times a certain number, the result is 43.
What is the number?

X = number

$3x - 20 = 43$

2. The perimeter of a rectangular athletic field is 104 m and the length is 16 m more than the width. Find the length and the width.

width = X

Length = X + 16

$P = 2L + 2W$

$104 = 2(X+16) + 2X$

3. An appliance store decreases the price of a 19-in. television set 22% to a sale price of $505.44.
What was the original price?

X = original price

Discount = original price − discount amount

discount = percent of original

$505.44 = X - 0.22X$

4. Money is borrowed at 13% simple interest. After one year, $1007.96 pays off the loan.
How much was originally borrowed?

1007.96 Total

X = loan amount

Total = loan + interest

interest = percent of loan

$1007.96 = X + 0.13(x)$

5. The sum of three consecutive odd integers is 183. What are the integers?

1st number = x

2nd number = x + 2

3rd number = x + 4

$X + X+2 + X+4 = 183$