

# Answer Key

Ms. Wang

Review Chapter 6 and Chapter 7.1 & 7.2

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## A. Write an expression to match each phrase.

1. four times a number, decreased by twenty

$$4x - 20$$

2. Eight less than a number

$$x - 8$$

3. Eight more than a number

$$x + 8 \text{ / } 8 + x$$

4. the product of three and a number x, divided by eight

$$\frac{3x}{8}$$

## B. Solve the following equations to find the value of n

a)  $n + 7 = 19$

$$n = 19 - 7$$

$$\boxed{n = 12}$$

b)  $n - 7 = 20$

$$n = 20 + 7$$

$$\boxed{n = 27}$$

c)  $3n = 18$

$$3 \cdot n = 18$$

$$n = \frac{18}{3}$$

$$\boxed{n = 6}$$

d)  $-5(n + 3) = 50$

$$(-5 \cdot n) + (-5 \cdot 3) = 50$$

$$-5n + (-15) = 50$$

$$-5n - 15 = 50$$

$$-5n = 50 + 15$$

$$-5n = 65$$

$$n = \frac{65}{-5}$$

$$\boxed{n = -13}$$

e)  $3(n - 6) + 16 = 10$

$$3 \cdot n - 3 \cdot 6 + 16 = 10$$

$$3n - 18 + 16 = 10$$

$$3n - 2 = 10$$

$$3n = 10 + 2$$

$$3n = 12$$

$$n = \frac{12}{3}$$

$$n = \boxed{4}$$

f)  $3(n + 4) + 17 = 10$

$$3n + 3 \cdot 4 + 17 = 10$$

$$3n + 12 + 17 = 10$$

$$3n + 29 = 10$$

$$3n = 10 - 29$$

$$3n = -19$$

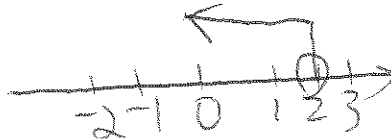
$$n = \boxed{\frac{-19}{3}}$$

**C. Solve each inequality and graph its solution.**

a)  $10 + m < 12$

$$m < 12 - 10$$

$$m < 2$$

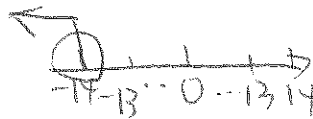


b)  $-4 - n > 10$

$$-n > 10 + 4$$

$$-n > 14$$

$$n < -14$$



**D. Multiple Choices**

C

- a) The length of Interstate 90 from the West Coast to the East Coast is 818.2 miles less than 2 times the length of Interstate 95 from southern Florida to northeast Maine. Let  $m$  be the length of Interstate 95. Which expression can you use to represent the length of Interstate 90?

○A  $2m + 818.2$


○B  $818.2 - 2m$

○C  $2m - 818.2$

○D  $818.2m + 2$

- b) From question a, when  $m = 1924$  miles, what is the length of Interstate 90? (You can use the calculator)

$$\begin{aligned} & 2 \cdot 1924 - 818.2 \\ & = 3848 - 818.2 \\ & = 3029.8 \text{ miles} \end{aligned}$$

 c) Which expression is not equivalent to  $81x + 54$ ?

☐ A  $27(3x + 2)$

☐ B  $3(27x + 18)$

☐ C  $9(9x + 6)$

☐ D  $6(13x + 9)$

