Name Answer Key

PRACTICE –Mini Lesson #5 (Math 7 PLUS)
Variables, Expressions – Writing, Simplifying, Evaluating

- **Write a variable expression for each word phrase.**

1) **14 divided by m** $14 \div m$ or $\frac{14}{m}$

2) **the sum of 3 and k** $3 + k$

3) **g less than 25** $25 - g$

4) **the number of hours in d days** $24d$

5) **the number of dozens in e eggs** $e \div 12$ or $\frac{e}{12}$

- **Simplify each expression. Show work and box in your simplified answer.**

6) $-5[9 \div (3-6)] + (-4)^2$

$-5(9 \div -3) + (-4)^2$

$-5(-3) + (-4)^2$

$-5(-3) + 16$

$15 + 16 = \boxed{31}$

7) $-2^4 + (-24) \div 8 \cdot 5$

$-16 + (-24) \div 8 \cdot 5$

$-16 + -3 \cdot 5$

$-16 + -15 = \boxed{-31}$

8) $-13 - \frac{10+6}{2 \cdot 4} = -13 - \frac{16}{2 \cdot 4} = -13 - \frac{16}{8} = -13 - 2 = -13 + -2$

$\boxed{-15}$

9) $(8 \div 8 + 3 \cdot -11) \div 2$

$(1 + 3 \cdot -11) \div 2$

$(1 + -33) \div 2$

$(-32) \div 2 = \boxed{-16}$

10) $3[8 - 3 \cdot 2 - 4(5-2)] = 3(8 - 3 \cdot 2 - 4(5-2))$

$3(8 - 3 \cdot 2 - 4(3))$

$3(8 - 3 \cdot 2 - 12)$

$3(8 + -6 + -12)$

$3(2 + -12)$

$3(-10)$

- **Evaluate.**

11) $7ab^2$, for $a = 2$ and $b = -4$

$7(2)(-4)^2$

$7(2)(16)$

$14(16) = 224$

12) $j(-5 + k)$, for $j = -4$ and $k = 6$

$(-4)(-5 + 6)$

$-4(1) = -4$

13) $\frac{ab}{2} + 4c$, for $a = 6, b = 5, c = -3$

$\frac{(6)(5)}{2} + 4(-3) = \frac{30}{2} + 4(-3) = 15 + 4(-3) = 15 + -12$

3

14) $x(y + 5) - z^2$, for $x = 3, y = 2, z = -7$

$(3)((2)+5)-(-7)^2$

$3(7) - (-7)^2$

$3(7) - 49 = 21 - 49 = -28$

15) $\frac{x-y}{4} + (x - 6)$, for $x = 52$ *and* $y = 12$

$\frac{(52)-(12)}{4} + ((52)-6) = \frac{40}{4} + (52-6) = 10 + (52-6)$

$10 + 46$

56

- **Write an expression you could use to find the area of the shaded figure. Find the area.**

16) **Expression** $(6 \cdot 6) - (2 \cdot 2) = 36 - 4$

17) **Area** 32 units^2