

Be sure to show all of your work. Do not use a calculator and do use a pencil ☺

Name:

Block:

Expressions and Equations Study Guide - 6ee2 and 6ee6

(a) Write as an algebraic expression

- 1) A number increased by 15
- 2) A number times 10
- 3) The quotient of a number and 5
- 4) 4 less than 2 times a number
- 5) 5 times the sum of a number and 8
- 6) Twice the difference of a number and 9

(b) Evaluate- show all work!

- 6) $5a + 3b$ when $a = 2$ and $b = 1.2$
- 7) $4(n+3) - 2n$ when $n = 8$
- 8) $3ab$ when $a = 1.5$ and $b = 6$
- 9) $\frac{x^2 + y^3}{3}$ when $x = 2$ and $y = 3$

(c) Write an expression.

- 10) It costs \$50 to rent the skating rink plus \$3 per person.
 - a) Evaluate the expression if 30 people come to skate
- 11) An amusement park charges \$28 to enter and \$0.35 per ticket to ride.
 - a) Evaluate the expression if you buy 9 tickets.

(d) For each situation- define the variable, write an expression and solve.

- 12) If 3 is added to twice a number, the result is 17. Find the number.
- 13) When a number is increased by 8, the result is 13. Find the number.
- 14) Four times a number, increased by 2 is 34. Find the number.
- 15) 7 more than 4 times a number is 35. Find the number.

(e) Combine the Like Terms

- 16) $7(2 + 3n) + 9$
- 17) $2x + 5y + 4x - 3y$
- 18) $7x^2 + 3y^2 + 3x + 2x^2 + 2$

(f) Solve:

- 19) $2 + 4^2 \times 4 + (2 \times 9)$
- 20) $2 + (5 \times 4) - 7 + 2$
- 21) $6 + 35 \div 7 - 10$

(g) Solve for the variable: show work for and check each problem.

- 22) $1.5n = 7.5$
- 23) $19.53 + a = 64$
- 24) $39 = y - 101$
- 25) $\frac{p}{6} = 90$
- 26) $3x = 57$
- 27) $\frac{m}{9} = 13$
- 28) $d + 2.6 = 7.1$
- 29) $12.2 + e = 40$
- 30) $h \div 12 = 13$