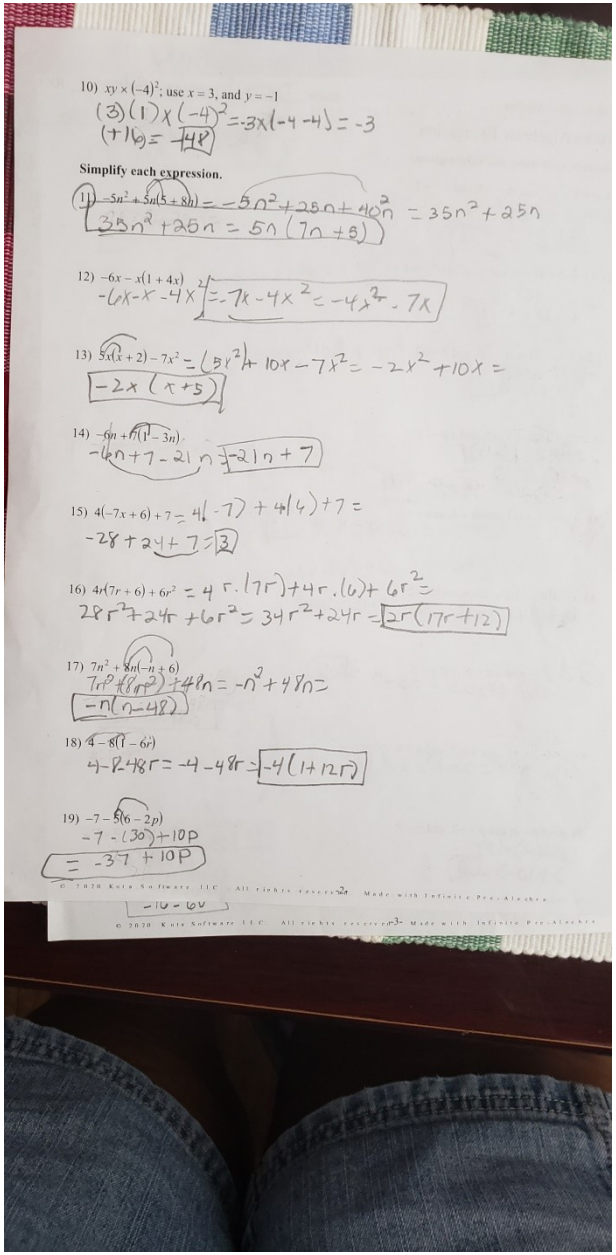


10) $xy \times (-4)^2$; use $x = 3$, and $y = -1$

$(3)(1) \times (-4)^2 = 3 \times (-4 \cdot -4) = -3$

$(+16) = +48$

Simplify each expression.

11) $-5n^2 + 5n(5 + 8n) = -5n^2 + 25n + 40n^2 = 35n^2 + 25n$

$35n^2 + 25n = 5n(7n + 5)$

12) $-6x - x(1 + 4x)$

$-6x - x - 4x^2 = -7x - 4x^2 = -4x^2 - 7x$

13) $5x(x + 2) - 7x^2 = (5x^2) + 10x - 7x^2 = -2x^2 + 10x =$

$-2x(x + 5)$

14) $-6n + 7(1 - 3n)$

$-6n + 7 - 21n = -21n + 7$

15) $4(-7x + 6) + 7 = 4(-7) + 4(4) + 7 =$

$-28 + 24 + 7 = 3$

16) $4r(7r + 6) + 6r^2 = 4r \cdot (7r) + 4r \cdot (6) + 6r^2 =$

$28r^2 + 24r + 6r^2 = 34r^2 + 24r = 2r(17r + 12)$

17) $7n^2 + 8n(-n + 6)$

$7n^2 + (8n^2) + 48n = -n^2 + 48n =$

$-n(n - 48)$

18) $4 - 8(1 - 6r)$

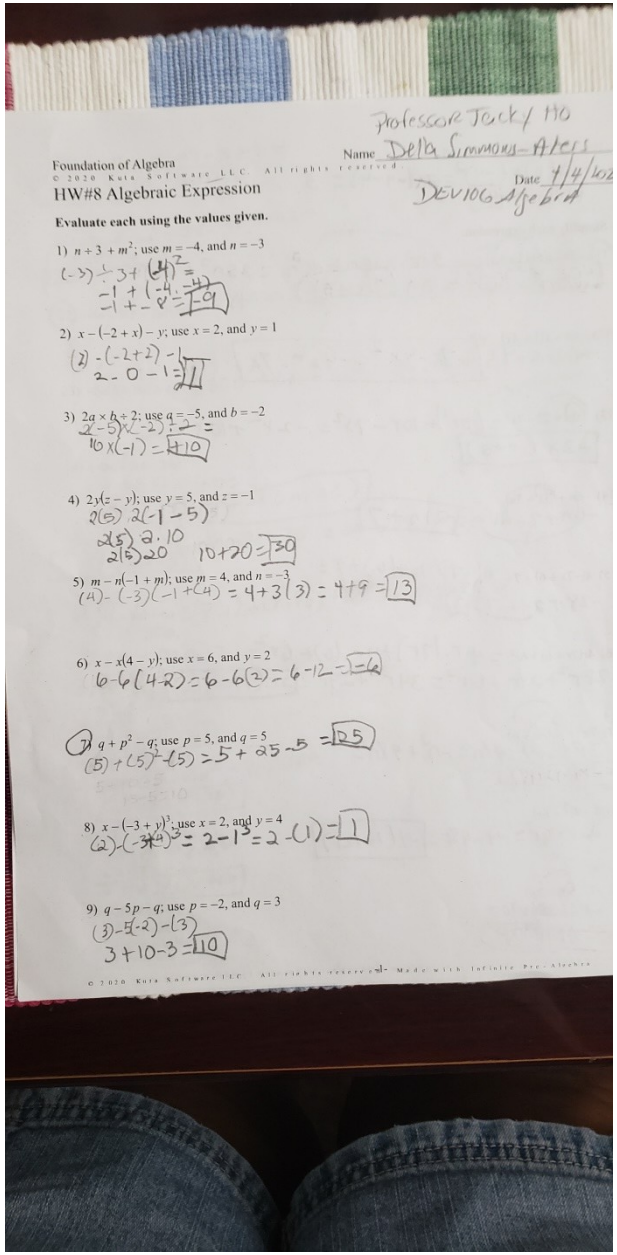
$4 - 8 + 48r = -4 + 48r = -4(1 + 12r)$

19) $-7 - 5(6 - 2p)$

$-7 - (30) + 10p$

$= -37 + 10p$

$-10 - 6v$



Professore Jack / Mo

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Date 7/4/202

DEV106 Algebra

Foundation of Algebra

HW#8 Algebraic Expression

Evaluate each using the values given.

1) $n + 3 + m^2$; use $m = -4$, and $n = -3$

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

$-1 + 1 (-4) = -4$

$-1 + -8 = -9$

2) $x - (-2 + x) - y$; use $x = 2$, and $y = 1$

$(2) - (-2 + 2) - 1$

$2 - 0 - 1 = 1$

3) $2a \times b \div 2$; use $a = -5$, and $b = -2$

$2(-5) \times (-2) \div 2 =$

$10 \times (-1) = -10$

4) $2y(z - y)$; use $y = 5$, and $z = -1$

$2(5)\ 2(-1 - 5)$

$2(5)\ 2 \cdot 10$

$2(5)\ 20$ $\quad 10 + 20 = 30$

5) $m - n(-1 + m)$; use $m = 4$, and $n = -3$

$(4) - (-3)(-1 + (4)) = 4 + 3(3) = 4 + 9 = 13$

6) $x - x(4 - y)$; use $x = 6$, and $y = 2$

$6 - 6(4 - 2) = 6 - 6(2) = 6 - 12 = -6$

7) $q + p^2 - q$; use $p = 5$, and $q = 5$

$(5) + (5)^2 - (5) = 5 + 25 - 5 = 25$

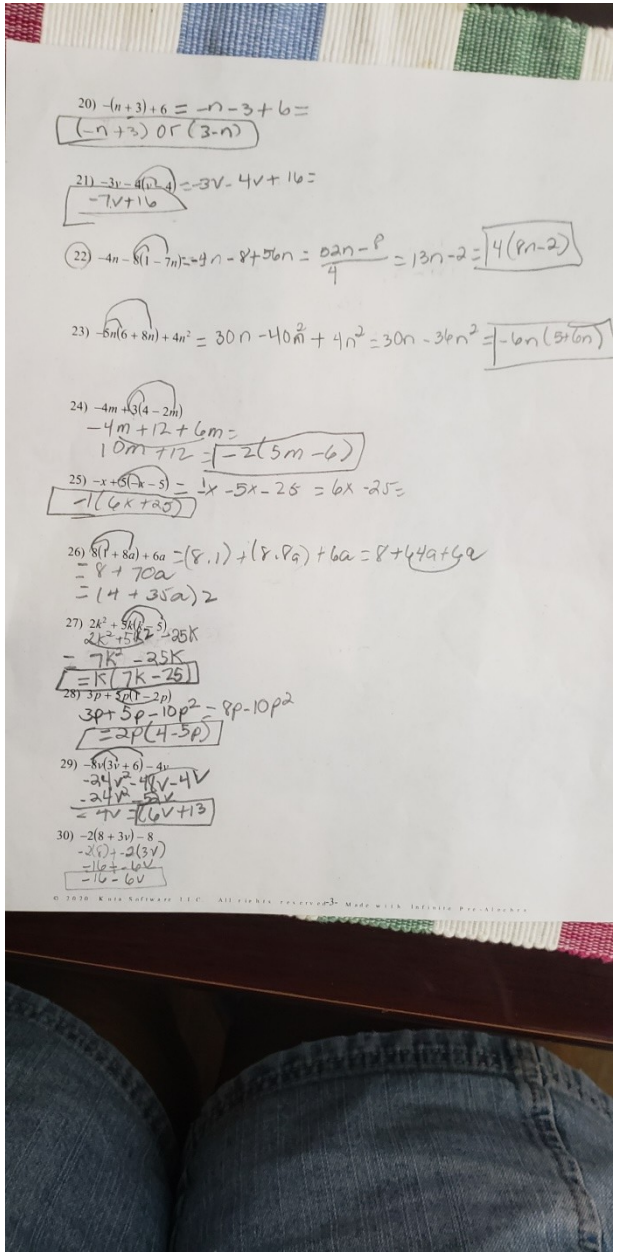
8) $x - (-3 + y)^3$; use $x = 2$, and $y = 4$

$(2) - (-3 + 4)^3 = 2 - 1^3 = 2 - (1) = 1$

9) $q - 5p - q$; use $p = -2$, and $q = 3$

$(3) - 5(-2) - (3)$

$3 + 10 - 3 = 10$



20) $-(n+3)+6 = -n-3+6 =$
$(-n+3)$ or $(3-n)$

21) $-3v-4(v-4) = -3v-4v+16 =$
$-7v+16$

22) $-4n-8(1-7n) = -4n-8+56n = \frac{52n-8}{4} = 13n-2 = 4(8n-2)$

23) $-6n(6+8n)+4n^2 = 30n-40n^2+4n^2 = 30n-36n^2 = -6n(5+6n)$

24) $-4m+3(4-2m)$
$-4m+12+6m =$
$10m+12 = -2(5m-6)$

25) $-x+6(-k-5) = 1x-5x-25 = 6x-25 =$
$-1(6x+25)$

26) $8(1+8a)+6a = (8 \cdot 1)+(8 \cdot 8a)+6a = 8+64a+6a$
$= 8+70a$
$= (4+35a)2$

27) $2k^2+5k(k-5)$
$2k^2+5k^2-25k$
$= 7k^2-25k$
$= k(7k-25)$

28) $3p+5p(1-2p)$
$3p+5p-10p^2 = 8p-10p^2$
$= 2p(4-5p)$

29) $-8v(3v+6)-4v$
$-24v^2-48v-4v$
$-24v^2-52v$
$= 4v(-6v+13)$

30) $-2(8+3v)-8$
$-2(8)+-2(3v)$
$-16+-6v$
$-16-6v$

