Name: Teacher's Date: _____

Multiplying & Dividing Algebraic Expressions

Simplify the following algebraic expressions.

1. $5 \cdot 5q$

$25q$

2. $-3r \cdot 12$

$-36r$

3. $-5(5s - 12)$

$-25s + 60$

4. $4(2a + 6) - 4(2a - 4)$

$8a + 24 - 8a + 16$

40

5. $4ab + 5c - (2ab - 2c)$

$4ab + 5c - 2ab + 2c$

$2ab + 7c$

6. $\frac{2d-8}{2} + 3d - 7$

$1d - 4 + 3d - 7$

$4d - 11$

7. $\frac{35a + 10b - 15 + 10a}{5}$

$7a + 2b - 3 + 2a$

$9a + 2b - 3$

8. $(18k - 7) - 3 + (13k - 12) - 5$

$18k - 7 - 3 + 13k - 12 - 5$

$31k - 27$

9. $-2(12c^2 - 5) + (12c^2 - 5) \div 2$

$-24c^2 + 10 + 6c^2 - 2.5$

$-18c^2 + 7.5$

10. $(6a - 12) \div 3 - (5a - 12)$

$2a - 4 - 5a + 12$

$-3a + 8$

11. $-2(6b + 12) + (6b - 18) \div -2$

$-12b - 24 - 3b + 9$

$-15b - 15$

12. $(3a + 7) - (6b - 3) + (12a - 16) \div 4$

$3a + 7 - 6b + 3 + 3a - 4$

$6a - 6b + 6$

13. $\frac{6(y + 12) - (9y - 6)}{3}$

$6y + 72 - (3y - 2)$

$6y + 72 - 3y + 2$

$3y + 74$

14. $4(0.4x - 8.2)$

$1.6x - 32.8$

15. $\frac{1}{2}(12n - 36) + \frac{1}{6}(18n)$

$.5(12n - 36) + .17(18n)$

$6n - 18 + 3n$

$9n - 18$

$9.06n - 18$

16. $-5(0.8a + 3.2) + (2.4a + 3.6) \div 6$

$-4a - 16 + .4a + .6$

$-3.6a - 15.4$

11a

Add + subtract.

Multiply & Divide Algebra

Lesson 7

Simplify the following algebraic expressions

a) (8b +7) + (3b – 9)

8b+7+3b-9

11b - 2

b) (4e – 10) – (3e – 4)

4e-10-3e+4

e - 6

c) (8d – 4) – (4d + 5)

8d-4-4d-5

4d - 9

d) (2a + 7) + (8 – 5a)

2a+7+8-5a

-3a+15

e) (8c – 5) – (-4c + 3)

8c-5+4c-3

12c - 8

f) (9 – 6x) – (4 – 3x)

9-6x-4+3x

-3x+5

g) (3a + 7) – (8 - 2a) + (5a – 4)

3a+7-8+2a+5a-4

10a - 5

h) (12b – 5) – (2b + 5) – (2b – 5)

12b-5-2b-5-2b+5

8b - 5

i) 3(2a + 5) -3 (2a – 5)

6a+15-6a+15

30

j) -6 (4a + 2) -2 (4 – 4a)

-24a-12-8+8a

-16a-20

k) (18k – 12) ÷6 + (45k – 40) ÷5

3k-2+9k-8

12k-10

or 18k-12-6+45k-40 / -5

63k-63

l) $\frac{2d + 4 + 3d - 2}{2}$

2d+4+1.5d-1

3.5d+3

m) -2 (12b + 8) + (21b – 14) ÷ 7

-24b-16+3b-2

-21b - 18

n) (28v – 7) ÷ 7 + 4 (2v – 6)

4v-1+8v-24

12v - 25

o) ¼(24n – 36) + ½ (12n)

6n-9+6n

12n-9

.25(24n-36)+.5(12n)

p) (2x + 6) + (5a – 7)

2x+6+5a-7

2x+5a-1

5a+2x-1