Final Review.

Write the definition of each word.

1. algebra

2. variable

3. order of operations

4. formula

What do the letters in PEMDAS mean?

1. P

2. E

3. M

4. D

5. A

6. S

Apply the property of equality to the equation and solve both sides.

1. $2 = 2$ multiply both sides by -8

2. $-6 = -6$ add 4 to both sides

3. $12 = 12$ divide both sides by 3 using the fraction symbol

4. $-1 = -1$ subtract 3 from both sides

Solve

1. $-6(4 - 1) =$

2. $3(2 + 6) =$

3. $6(5 - 2) =$

4. $-4(6 - 5) =$

5. $V = l \times w \times h$, where $l = 5$, $w = 6$, $h = 2$

6. $A = b \times h$, where $b = 10$ and $h = 4$

7. $h = -16t^2$, where $t = 3$

8. $t = \frac{d}{r}$, where $d = 100$ and $r = 50$

9. $x - 5 = 3$

10. $b + 4 = 9$

11. $x - 5 = 0$

12. $r + 3 = 9$

13. $4k = 24$

14. $z \div 7 = 3$

15. $2k = 40$

16. $\frac{t}{2} = 5$

17. $y \div 6 = 36$

Simplify using the order of operations.

1. $6 + 5 – 1 + 3$

2. $7(3 – 1) + 4$

3. $-2(4 + 2) + 10$

4. $5 – (5 – 2) + 2 – 1$

5. $10 \times 2 \div 4 \times 3 \div 5$

6. $3(4 – 1)^2 + 10$

7. $\dfrac{5 \times 4 + 5}{3 - 1} =$

8. $1 + [\ 12 - (4 + 2)]$

9. $\dfrac{4 \times 3 \times 55}{3 \times 2 \times 11}$

10. $25 - [3 + (2 - 1)^3] + 2$

11. $\dfrac{7}{3} \times \dfrac{15}{2} \times \dfrac{8}{7}$

12. $\dfrac{[8 - (4 - 1)] - 25}{(2+ 2)^2 - 12}$

Evaluate each expression.

1. $3c - 5$, when $c = 8$

2. $-2b$, when $b = -9$

3. $-r^2 + 1$, when $r = 4$

4. $16q + 12$, when $q = -1$

5. $11t^2 + 3t$, when $t = 3$

6. $\frac{14x - 6}{11}$, when $x = 2$

7. $-2x^3 + 4x^2$, when $x = -2$