EXAM 1C*   PRE ALGEBRA   Dr. Rapalje

SHOW ALL WORK on this test or on separate!   Circle final answers. **NO CALCULATORS!**

PART 1: (2 points each) Circle your answers!
In 1 - 16, give the value.

1. $12 \div 3 \bullet 2$

2. $3 + 7 \bullet 7$

3. $5 - 5 \bullet 0$

4. $4 + 6 \bullet 8 + 2$

5. $(-18) + 12$

6. $(-18) + (-12)$

7. $0 \div 4$

8. $(-18) \div 0$

9. $(-18) - (-24)$

10. $(-8) \bullet 4$

11. $(-6) \bullet (-8)$

12. $(-32) \div 8$

13. $(-2)^2$

14. -2^2

15. $(-1)^3$

16. $(-1)^2$

17. $2^2 + 3^2$

18. $2^2 - 3^2$

In 19 – 23, simplify and combine like terms. Use the distributive property as necessary.

19. $2x + 2x$

20. $4 + 2(3x - 6)$

21. $5(x - 4) + 6(x + 5)$

22. $5(x - 4) - 6(x + 5)$

23. $4(3x + 2) - 7(x - 5)$

EXAM 1C*   PRE ALGEBRA   Dr. Rapalje

In 24 - 28, given $x = -3$ and $y = 4$. Find the values of the expressions.

24. $2x + 3y$ 25. $2xy$ 26. $4x + 2xy - 9y$

27. $x^2 + y^2$ 28. $x^2 - y^2$

In 29 – 32, give an expression in terms of the unknown number x.

29. Seven less than twice an unknown number.

30. Seven less an unknown number.

31. Suppose you have a total of $1000 in two accounts. If you have x dollars in one of the accounts, how much is in the other account?

32. Suppose you have a total of x dollars in two accounts. If you have $1000 in one of the accounts, how much is in the other one?

EXAM 1C*   PRE ALGEBRA   Dr. Rapalje

PART 2: (4 points each, partial credit)
In 33 – 42, solve the equations.

33. $x + 5 = -25$

34. $-4x = -20$

35. $-x = 25$

36. $6x + 8 = 38$

37. $4x + 12 = -8$

38. $-4x - 12 = 24$

39. $8x + 12 = 2x - 30$

40. $-4x - 12 = 2x + 30$

41. $8x - 3(4 + 2x) = -6$

42. $-2(2x - 4) - 3(3x + 2) = -24$

Exam 1C* PreAlgebra Solutions   Dr. Rapalje

1. $12 \div 3 \cdot 2$
$4 \cdot 2$
$\boxed{8}$

2. $3 + 7 \cdot 7$
$3 + 49$
$\boxed{52}$

3. $5 - 5 \cdot 0$
$5 - 0$
$\boxed{5}$

4. $4 + 6 \cdot 8 + 2$
$4 + 48 + 2$
$52 + 2$
$\boxed{54}$

5. $(-18 + 12$
$\boxed{-6}$

6. $(-18) + (-12)$
$\boxed{-30}$

7. $0 \div 4$
$\boxed{0}$

8. $(-18) \div 0$
$\boxed{\text{Undef}}$

9. $(-18 - (-24)$
$-18 + 24$
$\boxed{6}$

10. $(-8 \cdot 4$
$\boxed{-32}$

11. $(-6) \cdot (-8)$
$\boxed{48}$

12. $(-32) \div 8$
$\boxed{-4}$

13. $(-2)^2$
$(-2)(-2)$
$\boxed{4}$

14. -2^2
$-2 \cdot 2$
$\boxed{-4}$

15. $(-1)^3$
$(-1)(-1)(-1)$
$\boxed{-1}$

16. $(-1)^2$
$(-1) \cdot (-1)$
$\boxed{1}$

17. $2^2 + 3^2$
$4 + 9$
$\boxed{13}$

18. $2^2 - 3^2$
$4 - 9$
$\boxed{-5}$

19. $2x + 2x$
$\boxed{4x}$

20. $4 + 2(3x - 6)$
$4 + 6x - 12$
$\boxed{6x - 8}$

21. $5(x - 4) + 6(x + 5)$
$5x - 20 + 6x + 30$
$\boxed{11x + 10}$

22. $5(x - 4) - 6(x + 5)$
$5x - 20 - 6x - 30$
$\boxed{-x - 50}$

23. $4(3x + 2) - 7(x - 5)$
$12x + 8 - 7x + 35$
$\boxed{5x + 43}$

24. $x = -3 \quad y = 4$
$2x + 3y$
$2(-3) + 3(4)$
$-6 + 12$
$\boxed{6}$

25. $2xy$
$2(-3)(4)$
$(-6)(4)$
$\boxed{-24}$

26. $4x + 2xy - 9y$
$4(-3) + 2(-3)(4) - 9(4)$
$(-12) + (-24) - 36$
$\boxed{-72}$

27. $x^2 +$
$(-3)^2 +$
$9 +$
$\boxed{25}$

28. $x^2 - y^2$
$(-3)^2 - (4)^2$
$9 - 16$
$\boxed{-7}$

29. $2x - 7$

30. $7 - x$

31. $1000 - x$

32. $x - 1000$

33. $x + 5 = -25$
$\quad -5 \quad -5$
$\boxed{x = -30}$

34. $-4x = -20$
$\overline{-4} \quad \overline{-4}$
$\boxed{x = 5}$

35. $-x = 25$
$\overline{-1} \quad$
$\boxed{x = -25}$

36. $6x + 8 = 38$
$\quad -8 \quad -8$
$\dfrac{6x}{6} = \dfrac{30}{6}$
$\boxed{x = 5}$

37. $4x + 12 = -8$
$\quad -12 \quad -12$
$\dfrac{4x}{4} = \dfrac{-20}{4}$
$\boxed{x = -5}$

38. $-4x - 12 = 24$
$\quad +12 \quad +12$
$\dfrac{-4x}{-4} = \dfrac{36}{-4}$
$\boxed{x = -9}$

39. $8x + 12 = 2x$
$\quad -12$
$8x = 2x - 4$
$-2x \quad -2x$
$\dfrac{6x}{6} = \dfrac{-42}{6}$
$\boxed{x = -7}$

40. $-4x - 12 = 2x + 30$
$\quad +12 \quad\quad +12$
$-4x = 2x + 42$
$-2x \quad -2x$
$\dfrac{-6x}{-6} = \dfrac{42}{-6}$
$\boxed{x = -7}$

41. $8x - 3(4 + 2x) = -6$
$8x - 12 - 6x = -6$
$2x - 12 = -6$
$\quad +12 \quad +12$
$\dfrac{2x}{2} = \dfrac{6}{2}$
$\boxed{x = 3}$

42. $-2(2x - 4) - 3(3x + 2) = -24$
$-4x + 8 - 9x - 6 = -24$
$-13x + 2 = -24$
$\quad -2 \quad -2$
$-13x = -26$
$\boxed{x = 2}$