

Review for Intermediate Algebra Test ~~II~~ I

Questions 1 through 4 refer to the following:

Simplify the given expression:

- 1)  $(3x^2 - 5x + 9) + (7x^2 + 8x - 15)$   
 A)  $10x^2 - 3x + 6$  C)  $10x^2 + 3x + 6$   
 B)  $10x^2 + 3x - 6$  D)  $10x^2 - 3x - 6$
- 2)  $(18p^4q - 12p^3q^2r) \div (6p^2q)$   
 A)  $2p^2 - 3pqr$  C)  $3p^2q - 2p^2qr$   
 B)  $3pq - 2pq^2$  D)  $3p^2 - 2pqr$
- 3)  $(a - 4b) - (9a + 2b)$   
 A)  $-8a - 2b$  C)  $-10(a + b)$   
 B)  $-8a - 6b$  D)  $-14(a - b)$
- 4)  $4(3x - 2) + 7(3 - 2x)$   
 A)  $2x + 13$  C)  $-2x + 13$   
 B)  $-2x - 13$  D)  $2x - 13$
- 5) What is  $8y^2 + 4y - 3$  subtracted from  $5y^2 + 2y - 1$ ?  
 A)  $-3y^2 - 2y + 2$  C)  $3y^2 - 2y + 2$   
 B)  $-3y^2 + 2y - 2$  D)  $3y^2 + 2y - 2$
- 6) Find the product of the given expression:

$$-5b^2(2b - 4b^2)$$

- A)  $-10b + 20b^2$  C)  $-10b^3 + 20b^4$   
 B)  $-10b^3 - 20b^4$  D)  $-10b^2 - 20b^2$

Questions 7 through 9 refer to the following:

Expand and simplify the given polynomials:

- 7)  $(5y - 2)(y - 4)$
- 8)  $(3x + y)^2$
- 9)  $(x + 9)(x - 2) - x^2$
- 10) Which binomial is equivalent to  $3(x - 1) - 2(x - 3)$ ?  
 A)  $x - 7$  C)  $x + 3$   
 B)  $x + 5$  D)  $5x - 7$
- 11) Find the quotient of the given expression:

$$\frac{12x^4 - 20x^2 + 8x}{4x}$$

- A)  $3x^4 - 5x^2 + 4x$  C)  $3x - 5x^{\frac{1}{2}} + 2x^{\frac{1}{4}}$   
 B)  $3x^3 - 5x + 2$  D)  $3x^4 - 5x^2 + 2x$

- 12) What is the solution for  $x$  given the equation  $3x - 31 = -76$ .  
 A) -15 C) 15  
 B)  $\frac{107}{3}$  D)  $-\frac{107}{3}$
- 13) What is the solution for  $x$  given the equation  $\frac{4}{5}x + 23 = -25$ ?  
 A) -75 C) 75  
 B) -60 D) 60
- 14) What is the value of  $x$  in the equation  $x + \frac{3}{4} = \frac{4}{5}$ ?  
 A)  $-\frac{1}{9}$  C)  $\frac{7}{20}$   
 B)  $\frac{1}{20}$  D)  $\frac{1}{9}$

Questions 15 through 19 refer to the following:

Solve the given equation for the variable:

- 15)  $16 = 8 - 4y$   
 A) 6 B) -4 C) -2 D) -6
- 16)  $\frac{x}{24} = \frac{3}{8}$   
 A)  $\frac{3}{32}$  C) 6  
 B) 9 D) 1
- 17)  $7y - 35 = 2y$   
 A) -5 B) 5 C) -7 D) 7
- 18)  $2x + 20 = 52 - 6x$   
 A) 18 C) 4  
 B) 9 D) -4
- 19)  $5 - 3(d + 2) = 2(d + 1) - 2d$   
 A) 1 C) -1  
 B)  $-\frac{2}{3}$  D)  $-\frac{5}{3}$
- 20) What is the solution for  $n$  given the equation  $4n + 32 = 8n - n + 14$ ?
- 21) Determine the solution for  $x$  in the equation  $0.8x + 3.2 = 0.4x$ .
- 22) What is the value of  $n$  in the equation  $0.6(n + 10) = 3.6$ ?  
 A) 4 C) 5  
 B) -4 D) -0.4
- 23) Use the distributive property to solve for  $z$  in the equation  $14 = 15z - (2z + 12)$ .