

**Los Angeles Southwest College**

**Mathematics Department**

**Math 110 – Common Final Exam**

**Practice TEST (answers)**

1. Perform the indicated operation:  $-12 \cdot \left(-\frac{3}{4}\right)$   $\boxed{9}$
2. Perform the indicated operation:  $-7 - (-11)$   $\boxed{4}$
3. Simplify:  $\frac{7y}{16} + \frac{7y}{16}$   $\boxed{\frac{7}{8}y}$
4. Combine like terms:  $-3x + 3 + 6x - 9$   $\boxed{3x - 6}$
5. Perform the indicated operation:  $-4^2$   $\boxed{-16}$
6. Perform the indicated operation:  $-|-11|$   $\boxed{-11}$
7. Perform the indicated operation:  $-2(-3)(-7)$   $\boxed{-42}$
8. Perform the indicated operation:  $-2\sqrt{36}$   $\boxed{-12}$
9. Simplify:  $-2(2x - 3y + 4)$   $\boxed{-4x + 6y - 8}$
10. Divide:  $0.58 \overline{)0.7134}$   $\boxed{1.23}$

11. Simplify:  $\frac{-3 \cdot (-4)^2 - 5(3-7)}{-5^2}$   $\frac{28}{25}$
12. Find LCM of the set of terms:  $25x^2y^2, 15x^5y, 6x^4y^6$   $5^2 \cdot 2 \cdot 3$  or  $150$
13. Combine like terms:  $-7xy - 14x^2 + 5xy + x^2$   $-2xy - 13x^2$
14. Simplify:  $\frac{\frac{11}{12} - \frac{2}{3}}{\frac{1}{6} + \frac{1}{2}}$   $\frac{3}{8}$
15. Simplify:  $\frac{(3-5)^2 - (7-16)}{(2-4)3 + 2 \cdot 4}$   $\frac{13}{2}$
16. Simplify:  $11 - \frac{5}{6} \div \frac{2}{3}$   $\frac{39}{4}$  or  $9\frac{3}{4}$
17. Simplify:  $\left(2\frac{2}{3} + \frac{1}{2}\right) \cdot \left(3\frac{1}{3} - \frac{1}{6}\right)$   $\frac{361}{36}$  or  $10\frac{1}{36}$
18. Evaluate:  $a^3 - a^2$  for  $a = -2$   $-12$

19. Simplify:  $-3+2(-6-3\times 2)^2$  285

20. Simplify:  $\frac{4xy}{5} \times \frac{25}{12y}$   $\frac{5}{3}x$  or  $\frac{5x}{3}$

21. Combine like terms:  $-2x^2y^3+5x^3y^2-7x^2y^3-12x^3y^2+3xy^2$   $-9x^2y^3-7x^3y^2+3xy^2$

22. Multiply:  $-4x(2x^3-6x^2-5x+1)$   $-8x^4+24x^3+20x^2-4x$

23. Simplify:  $(3x+3)-(-5x+3)$  8x

24. Evaluate:  $9-2[-7-2^4(-1)]$  -9

25. Evaluate the expression:  $\frac{2x+3y}{z-y}$  for  $x=-2, y=3$  and  $z=-4$   $-\frac{5}{7}$

26. Perform the indicated operation:  $-\frac{4}{3} \div 2\frac{2}{7}$

$$\boxed{-\frac{7}{12}}$$

27. Evaluate:  $-4\sqrt{36} + 2\sqrt{81}$

$$\boxed{-6}$$

28. Multiply:  $-2y^5 \cdot (10y^4) \cdot (-3y^3)$

$$\boxed{60y^{12}}$$

29. Solve the equation:  $\frac{x}{6} - \frac{2}{3} = \frac{x}{9}$

$$\boxed{x = 12}$$

30. Solve the equation:  $9(x-4) - 13 = 4x + 12$

$$\boxed{x = \frac{61}{5}}$$

31. Solve the equation:  $6.9x - 8.4 = 4.02$

$$\boxed{x = 1.8}$$

32. Solve the equation:  $2.9(x + 8.1) = 7.8x - 3.95$

$$\boxed{x = 5.6}$$

33. Solve the equation:  $\frac{9}{2} = \frac{x}{10}$

$x = 45$

34. What percent of **15** is **3**?

$20\%$

35. **12** is **25%** of what number?

$48$

36. A piece of coaxial cable  $\frac{4}{5}$  m long is to be cut into 8 pieces of the same length. What is the length of each piece?

$\frac{1}{10}$

37. A recipe for muffins calls for  $\frac{1}{2}$  qt (quart) of buttermilk,  $\frac{1}{3}$  qt of skin milk, and  $\frac{1}{16}$  qt of oil. How many quarts of liquid ingredients does the recipe call for?

43
48

38. A rectangular table top measures **4/5** m long and **3/5** m wide. Find the following: a) it's area and b) it's perimeter.

<i>the area is equal to <math>\frac{12}{25} m^2</math> and the perimeter is equal to <math>\frac{14}{5} m</math></i>
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39. An ocean liner traveled 432 km in 12 hr. At that rate, how far would the boat travel in 42 hr?

<i>the boat would travel 1512km</i>
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40. A lab technician has 680 ml of a solution of water and acid: 3% is acid. How many milliliters are acids? water?

<i>there are 20.4 ml of acid and 659.6 ml of water</i>
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