

Math 001
Online practice test 2

1. Evaluate: $2 + 3(16 \div 2 \cdot 4)$
2. Evaluate: $2 + 3[2 + 3(2 + 3)]$
3. Evaluate: $-48 \div [-8 + (-2)^2]$
4. Evaluate the expression $4x + 3y + 2z$ for $x = 2, y = 5, z = -4$.
5. If $x = 3$ and $y = -2$, evaluate the expression $3(2x + y) - 2(x - y)$ Reduce to lowest terms. $\frac{12}{36}$ b) Convert to improper fractions: $6\frac{1}{3}$
6. Calculate the following. Reduce to lowest terms
 - a) $43\frac{3}{10} - 22\frac{3}{4}$
 - b) $\frac{1}{2} \cdot \frac{3}{5}$
7. Calculate the following. Reduce to lowest terms.
 - a) $2 \div 1\frac{1}{3}$
 - b) $4\frac{3}{5} \cdot 2\frac{1}{3}$
8. Compute: a) $-(-7)^2$ b) $\left(\frac{3}{5}\right)^2$
9. Place one of the symbols $<$, $>$, or $=$, between the pairs of numbers to make a true statement. a) $\sqrt{51}$ 8 b) 9 $\sqrt{83}$
10. Approximate using a calculator. Round your result so that it is correct to the stated place value.
 - a) $\sqrt{53}$ (tenth)
 - b) $\sqrt{7.834}$ (hundredth)
11. Simplify the radicals by identifying factors which are perfect squares.
 - a) $\sqrt{20}$
 - b) $\sqrt{98}$
12. Simplify the radicals by identifying factors which are perfect squares.
 - a) $\sqrt{\frac{1}{9}}$
 - b) $\sqrt{\frac{8}{25}}$
13. Simplify the following expressions by collecting like terms.
 - a) $8f + 6f - 3f + 8g$
 - b) $5.3 + 6.2x + 9.1x + 17.2 + 54y$

14. Find the numerical value of the following expressions.
a) $6d - 5d + 4$ when $d = 12$ b) $0.2x + 0.3y + 1.4z + 6$ when $x = 4, y = 3, z = 6$
15. Simplify: $-(6x + 7y - 9z)$
16. Simplify: $2[-2(5a - 6) - (2 - 5a)]$
17. Simplify: $4(6r + 3s + 7t) + 8(r + 5t + 6s)$
18. Add: $(4x^3 + 7x - 6) + (4x^4 - 3x^3 + 5x^2 - 8)$
19. Subtract: $(4x^3 + 8x^2 - 5x + 7) - (6x^3 - 6x^2 - 8x + 11)$
20. *Multiply:* a) $x^2y^3 \cdot x^2y^3$ b) $(-4x^4y^2)(3x^2)(-4x^4y^3)$
21. Simplify: a) $(y^3)^9 \cdot (y^3)^7$ b) $(-4xy^3z^2)^3$
22. Multiply: a) $3x(2x^2 + 4x)$ b) $x^3(3x^2 + 7x - 4)$
23. Multiply: a) $(x + 2)(x + 3)$ b) $(x^2 - x)(4x^5 - 3x^3)$