

## Math 2: Day 1 Review

1.  $(4)^{-2}$

A.  $-\frac{1}{16}$   
C.  $\frac{1}{16}$

B. 16  
D. -8

2.  $2k^8 \cdot 3k^3$

A.  $5k^{24}$   
C.  $6k^{11}$

B.  $5k^{11}$   
D.  $6k^{24}$

3. Simplify:  $\frac{x^5}{x^9}$

A.  $\frac{1}{x^{14}}$

B.  $x^4$

C.  $x^{14}$

D.  $\frac{1}{x^4}$

4. Evaluate  $9x^2y^{-2}$  for  $x = -3$  and  $y = 2$ .

A. 324

B.  $\frac{1}{20\frac{1}{4}}$

C.  $9(-6)^0$

D.  $\frac{1}{144}$

5. What is the quotient when  $(6x^4 - 9x^2 + 12x)$  is divided by  $3x$ ?

A.  $2x^4 - 3x^2 + 4x$

B.  $2x^3 + 6x + 4$

C.  $2x^3 + 3x + 4$

D.  $2x^3 - 3x + 4$

6. Simplify:  $\frac{27x^4y^2 - 12x^5y^4}{3xy^2}$

A.  $x^2 - 4xy$

C.  $81x^2 - 36x^2y^2$

B.  $9x^3 - 4x^4y^2$

D.  $9x^2y - 4x^3y^2$

7. Multiply:  $(3x - 4)(6x + 7)$

A.  $9x^2 + 3$

C.  $18x^2 - 3x - 28$

B.  $18x^2 - 28$

D.  $18x^2 + 3x - 28$

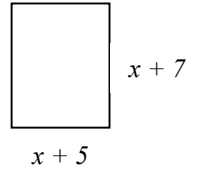
8. What is the area of the box?

A.  $-2x^2 + 10x + 25$

B.  $x^2 + 8x + 25$

C.  $2x + 12$

D.  $x^2 + 12x + 35$



9. If  $\frac{x}{5} = 7$ , then what does  $2x \div 5$  equal?

A. 3.5

C. 14

B. 7

D. 35

10. Simplify:  $\frac{64x^5}{4x^2}$

A.  $60x^{2.5}$

C.  $60x^3$

B.  $16x^{2.5}$

D.  $16x^3$

11. Which expression is equivalent to  $\sqrt[3]{8x^2y^3z^4}$ ?

A.  $2x^{\frac{3}{2}}yz^{\frac{3}{4}}$

C.  $\frac{2z}{x}$

B.  $2x^{\frac{2}{3}}yz^{\frac{4}{3}}$

D.  $\frac{2x}{z}$

12. Which expression is equivalent to  $\sqrt[4]{x^8}$ ?

A.  $x^2$

C.  $x^{12}$

B.  $x^{32}$

D.  $4x^8$

13. Simplify:  $(x + 3)(x - 2) + (x^2 + 4x - 7)$

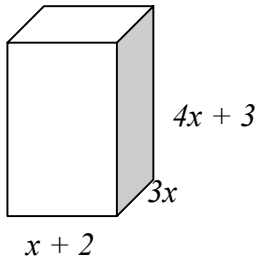
A.  $2x^2 + 5x - 13$

B.  $x^2 + 4x + 7$

C.  $2x + 12$

D.  $x^2 + 12x + 35$

14. Determine the Volume of the Rectangular Prism:



- A.  $4x^2 + 11x + 6$   
 B.  $12x^3 + 33x^2 + 18x$   
 C.  $8x + 5$   
 D.  $x^2 + 12x + 6$

15. The larger leg of a right triangle is 3 cm longer than its smaller leg. The hypotenuse is 6 cm longer than the smaller leg. How many centimeters long is the smaller leg?

- A. 9cm                      C. 12cm  
 B. 3cm                      D. 18cm

16. Simplify:  $(2x^0y)(-3xy^5)$

- A.  $-3y^6$                       C.  $5x^2y^5$   
 B.  $xy^6$                       D.  $-6xy^6$

17. Which one is equivalent to  $(x - 6)(x + 6)$ ?

- A.  $x^2 - 36$                       C.  $2x$   
 B.  $x^2 + 12x + 36$                       D.  $x^2 + 36$

18. Simplify:  $\frac{14c^3d^2 - 21c^2d^3}{14cd^2}$

- A.  $c^2 - \frac{3cd}{2}$                       C.  $c^2 - 21c^2d^2$   
 B.  $c^2 - \frac{3c^2d}{2}$                       D.  $c^2d - \frac{3cd}{2}$

19. Simplify:  $-2xy(-3xy^2 + 4x^2y)$

- A.  $-2x^3y^3$   
 B.  $-14x^3y^3$   
 C.  $-6x^2y^2 - 8x^2y^2$   
 D.  $6x^2y^3 - 8x^3y^2$

20. Simplify:  $(x + 2)(x^2 + 2x + 3)$

- A.  $x^3 + 7x + 6$   
 B.  $5x^2 + 7x + 6$   
 C.  $2x^3 + x^2 + x + 6$   
 D.  $x^3 + 4x^2 + 7x + 6$

21. Simplify:  $(3b^2cd^3)^3 \cdot (2cd)^2$

- A.  $27b^5c^7$                       C.  $108b^6c^5d^{11}$   
 B.  $4b^6c^5d^{11}$                       D.  $11b^5c^3d^6$

22. The larger leg of a right triangle is 4 cm longer than its smaller leg. The hypotenuse is 8 cm longer than the smaller leg. How many centimeters long is the smaller leg?

- A. 4cm                      C. 32cm  
 B. 8cm                      D. 12cm

23. Determine the Volume of the Pyramid if the length is  $x + 6$ , the width is  $3x^2$ , and the height is  $x + 2$ .

$$V = \frac{1}{3}bh$$

- A.  $3x^2 + 8$                       C.  $3x^3 + 6$   
 B.  $x^4 + 8x^3 + 12x^2$                       D.  $3x^4 + 24x^3 + 36x^2$

24. Simplify:  $(x - 5)^2$

- A.  $x^2 - 25$                       C.  $x + 25$   
 B.  $x^2 + 10x + 25$                       D.  $x^2 - 10x + 25$

25. Which expression is equivalent to  $x^{\frac{5}{2}}$ ?

- A.  $\sqrt[5]{x^2}$                       C.  $\sqrt{x^5}$   
 B.  $\sqrt[5]{5^2}$                       D.  $\sqrt[5]{x^{10}}$