

20. Evaluate: $6^2 - [12 \div (-2)]^3$
21. Identify, then correct, any errors in the work below.
 $(5 + 3)^2 \times 4 + 5$
 $= 8^2 \times 9$
 $= 64 \times 9$
 $= 576$
22. Evaluate: $\frac{5^{-3} \times (2 + 4)^2 \times 6(-9)^0}{-(4)^0 \times 6^3 \times (7 - 2)^2}$
23. Write the quotient of $\frac{(-7)^9}{(-7)^5}$ as a single power.
24. Simplify, then evaluate.
 $\frac{(-2)^6 \times (-2)^2}{(-2)^3 \times (-2)^0}$
25. Simplify, then evaluate.
 $\left(\frac{2^2}{5^0}\right)^4$
26. Simplify, then evaluate.
 $\frac{(2^4)^3 \times (2^2)^4}{(2^4 \times 2^4)^2}$
27. Simplify, then evaluate.
 $(4^6 \div 4^3)^2 - (2^8 \div 2^6)^2$

Problem

28. Evaluate: $5(5)^4 - 3(-3)^3$
 Show your steps.

Exam Review Unit 2

Answer Section

MULTIPLE CHOICE

1. A
2. A
3. D
4. D
5. B
6. C
7. B
8. C
9. D

10. B
11. A
12. A
13. B
14. C
15. C
16. D
17. C

SHORT ANSWER

18. From least to greatest: $5^2, 2^5, 4^3, 3^4$

19. $7^0 = 1$

20. 252

21. Error: The solution does not follow the order of operations. Do not add $4 + 5$ before evaluating brackets, evaluating exponents, or multiplying.

Correction:

$$\begin{aligned} & (5 + 3)^2 \times 4 + 5 \\ & = 8^2 \times 4 + 5 \\ & = 256 + 5 \\ & = 261 \end{aligned}$$

22. -5

23. $\frac{(-7)^9}{(-7)^5} = (-7)^4$

24. $(-2)^5 = -32$

25. $\left(\frac{2^2}{5^0}\right)^4 = \left(\frac{2^2}{1}\right)^4 = 2^8 = 256$

26. $\frac{(2^4)^3 \times (2^2)^4}{(2^4 \times 2^4)^2} = \frac{2^{20}}{2^{16}} = 2^4 = 16$

27. $(4^6 \div 4^3)^2 - (2^8 \div 2^6)^2 = (4^3)^2 - (2^2)^2 = 4^6 - 2^4 = 4080$

PROBLEM

28.
$$\begin{aligned} 5(5)^4 - 3(-3)^3 &= 5 \times 625 - 3 \times (-27) \\ &= 3125 + 81 \\ &= 3206 \end{aligned}$$