

Name: _____

Date: _____

Score: _____ / 19

Order of Operations with Powers

Evaluating expressions with exponents, negatives and substitution.

B E D M A S brackets, exponents, $\div$, $\times$, then $+$, $-$	$(-5)^2$ $= 25$	-5^2 $= -25$	Substitute use brackets around the value
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Section A — With Exponents

Follow the order of operations.

1. $-4 + 3 \times 2^2 =$ _____

2. $2^3 - 5 \times 2 =$ _____

3. $(-3)^2 + 6 \div 3 =$ _____

4. $18 \div (-2) + 4^2 =$ _____

5. $5 \times 2^3 - 12 =$ _____

6. $(-2)^3 - 3 \times 5 =$ _____

Section B — Brackets First

Evaluate each expression.

7. $(4 - 9)^2 =$ _____

8. $(2 + 3)^3 \div 25 =$ _____

9. $((-6) + 2)^2 \times 4 =$ _____

10. $(10 - 4)^2 - 30 =$ _____

Section C — Substitution

Substitute and evaluate.

11. Evaluate $2x^2 + 3x + -5$ when $x = 4$

12. Evaluate $3x^2 + -2x + 7$ when $x = 3$

13. Evaluate $-1x^2 + 6x + 2$ when $x = 5$

14. Evaluate $4x^2 + 0x + -9$ when $x = 2$

15. Evaluate $2x^2 + -7x + 1$ when $x = 6$

16. Evaluate $5x^2 + 3x + -4$ when $x = 2$

Section D — Thinking About Order

Answer as asked.

17. Why is $(-5)^2$ not equal to -5^2 ?

18. Evaluate $3(x + 2)^2$ when $x = 1$.

19. Which comes first, exponents or multiplication?

Order of Operations with Powers — Answer Key

For marking. Accept equivalent correct forms.

Section A — With Exponents

1. 8

2. -2

3. 11

4. 7

5. 28

6. 1

Section B — Brackets First

7. 25

8. 5

9. 64

10. 6

Section C — Substitution

11. 39

12. 28

13. 7

14. 7

15. 31

16. 22

Section D — Thinking About Order

17. brackets square the negative sign as well

18. 27

19. exponents
