



**THIRD SPACE  
LEARNING**

# Order of Operations Worksheet

Number and Quantity

**Grades 6 to 8**

## Questions

Name: .....

Date: .....

Evaluate 1 – 16. Show your work.

1  $3^2 = \underline{\hspace{2cm}}$

Answer

2  $2^4 = \underline{\hspace{2cm}}$

Answer

3  $5 + 2^3 = \underline{\hspace{2cm}}$

Answer

4  $4 \times 3^2 = \underline{\hspace{2cm}}$

Answer

5  $(2 + 3)^2 = \underline{\hspace{2cm}}$

Answer

## Order of Operations Worksheet | Grades 6 to 8

6  $6^2 - 4 \times 2 = \underline{\hspace{2cm}}$

Answer

7  $7 - 3 + 4 \div 2 = \underline{\hspace{2cm}}$

Answer

8 Li has 5 boxes. Each box contains  $2^3$  candies. How many candies does Li have in total?

Answer

9 A plant is 2 inches tall. Each month, for 5 months, it doubles in size. How tall is the plant after 5 months?

Answer

10 Anastasia has 7 stickers. Mel has triple as many stickers as Anastasia. Jada has triple as many stickers as Mel. Kyrie has triple as many stickers as Jada. How many stickers does Kyrie have?

Answer

## Order of Operations Worksheet | Grades 6 to 8

11  $(\frac{1}{5})^7$

Answer

12  $(\frac{2}{3})^4$

Answer

13  $22 + 5 \times (12 + 8)^4$

Answer

14  $(2 + 2.4)^2 \times 8 = \underline{\hspace{2cm}}$

Answer

15  $(12 \div 8)^3 - 0.25 \times 7$

Answer

## Order of Operations Worksheet | Grades 6 to 8

16  $0.4 \times (13^2 - 5) = \underline{\hspace{2cm}}$

Answer

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Evaluate both parts of 17 – 20. Notice if the answers are the same or different.

17 a.  $12 - 8 + 1 \div 2 = \underline{\hspace{2cm}}$

b.  $12 - (8 + 1) \div 2 = \underline{\hspace{2cm}}$

Answer

18 a.  $7 + 8^3 = \underline{\hspace{2cm}}$

b.  $(7 + 8)^3 = \underline{\hspace{2cm}}$

Answer

19 a.  $6^3 + 24 - 2 \times 18 = \underline{\hspace{2cm}}$

b.  $6^3 + 24 - (2 \times 18) = \underline{\hspace{2cm}}$

Answer

20 a.  $5.4^2 - 2.1 \times 9 + 4.7 = \underline{\hspace{2cm}}$

b.  $(5.4^2 - 2.1) \times 9 + 4.7 = \underline{\hspace{2cm}}$

Answer

## Answers

| Question number | Question                                      | Answers   | Standard |
|-----------------|---|---|----------|
| 1               | $3^2 = \underline{\hspace{2cm}}$              | $3^2$<br>$= 3 \times 3$<br>$= 9$  | 6.EE.1   |
| 2               | $2^4 = \underline{\hspace{2cm}}$              | $2^4$<br>$= 2 \times 2 \times 2 \times 2$<br>$= 16$                         | 6.EE.1   |
| 3               | $5 + 2^3 = \underline{\hspace{2cm}}$          | $5 + 2^3$<br>$= 5 + (2 \times 2 \times 2)$<br>$= 5 + 8$<br>$= 13$           | 6.EE.1   |
| 4               | $4 \times 3^2 = \underline{\hspace{2cm}}$     | $4 \times 3^2$<br>$= 4 \times (3 \times 3)$<br>$= 4 \times 9$<br>$= 36$     | 6.EE.1   |
| 5               | $(2 + 3)^2 = \underline{\hspace{2cm}}$        | $(2 + 3)^2$<br>$= 5^2$<br>$= 5 \times 5$<br>$= 25$                          | 6.EE.1   |
| 6               | $6^2 - 4 \times 2 = \underline{\hspace{2cm}}$ | $6^2 - 4 \times 2$<br>$= (6 \times 6) - 4 \times 2$<br>$= 36 - 8$<br>$= 28$ | 6.EE.1   |
| 7               | $7 - 3 + 4 \div 2 = \underline{\hspace{2cm}}$ | $7 - 3 + 4 \div 2$<br>$= 7 - 3 + 2$<br>$= 4 + 2$<br>$= 6$                   | 6.EE.1   |

## Order of Operations Worksheet | Grades 6 to 8 | Answers

| Question number | Question   | Answers  | Standard |
|-----------------|--|--|----------|
| 8               | Li has 5 boxes. Each box contains $2^3$ candies. How many candies does Li have in total?   | $5 \times 2^3$<br>$= 5 \times (2 \times 2 \times 2)$<br>$= 5 \times 8$<br>$= 40$ candies   | 6.EE.1   |
| 9               | A plant is 2 inches tall. Each month, for 5 months, it doubles in size. How tall is the plant after 5 months?  | $2 \times 2^5$<br>$= 2 \times (2 \times 2 \times 2 \times 2 \times 2)$<br>$= 2 \times 32$<br>$= 64$ inches   | 6.EE.1   |
| 10              | Anastasia has 7 stickers. Mel has triple as many stickers as Anastasia. Jada has triple as many stickers as Mel. Kyrie has triple as many stickers as Jada. How many stickers does Kyrie have? | $7 \times 3^3$<br>$= 7 \times (3 \times 3 \times 3)$<br>$= 7 \times 27$<br>$= 189$ stickers  | 6.EE.1   |
| 11              | $(\frac{1}{5})^7$  | $(\frac{1}{5})^7$<br>$= \frac{1}{5} \times \frac{1}{5} \times \frac{1}{5} \times \frac{1}{5} \times \frac{1}{5} \times \frac{1}{5} \times \frac{1}{5}$<br>$= \frac{1}{78,125}$ | 6.EE.1   |
| 12              | $(\frac{2}{3})^4$  | $(\frac{2}{3})^4$<br>$= \frac{2}{3} \times \frac{2}{3} \times \frac{2}{3} \times \frac{2}{3}$<br>$= \frac{16}{81}$   | 6.EE.1   |
| 13              | $22 + 5 \times (12 + 8)^4$   | $22 + 5 \times (12 + 8)^4$<br>$= 22 + 5 \times 20^4$<br>$= 22 + 5 \times (20 \times 20 \times 20 \times 20)$<br>$= 22 + 5 \times 160,000$<br>$= 22 + 800,000$<br>$= 800,022$   | 6.EE.1   |

## Order of Operations Worksheet | Grades 6 to 8 | Answers

| Question number | Question   | Answers  | Standard |
|-----------------|--|--|----------|
| 14              | $(2 + 2.4)^2 \times 8 = \underline{\hspace{2cm}}$  | $(2 + 2.4)^2 \times 8$<br>$= 4.4^2 \times 8$<br>$= (4.4 \times 4.4) \times 8$<br>$= 19.36 \times 8$<br>$= 154.88$                                | 6.EE.1   |
| 15              | $(12 \div 8)^3 - 0.25 \times 7$  | $(12 \div 8)^3 - 0.25 \times 7$<br>$= 1.5^3 - 0.25 \times 7$<br>$= 3.375 - 0.25 \times 7$<br>$= 3.375 - 1.75$<br>$= 1.625$                       | 6.EE.1   |
| 16              | $0.4 \times (13^2 - 5) = \underline{\hspace{2cm}}$   | $0.4 \times (13^2 - 5)$<br>$= 0.4 \times [(13 \times 13) - 5]$<br>$= 0.4 \times (169 - 5)$<br>$= 0.4 \times 164$<br>$= 65.6$                     | 6.EE.1   |
| 17              | a. $12 - 8 + 1 \div 2 = \underline{\hspace{2cm}}$<br>b. $12 - (8 + 1) \div 2 = \underline{\hspace{2cm}}$ | a. $12 - 8 + 1 \div 2$<br>$= 12 - 8 + 0.5$<br>$= 4 + 0.5$<br>$= 4.5$<br>b. $12 - (8 + 1) \div 2$<br>$= 12 - 9 \div 2$<br>$= 12 - 4.5$<br>$= 7.5$ | 6.EE.1   |
| 18              | a. Question $7 + 8^3 = \underline{\hspace{2cm}}$<br>b. $(7 + 8)^3 = \underline{\hspace{2cm}}$            | a. $7 + 8^3$<br>$= 7 + (8 \times 8 \times 8)$<br>$= 7 + 512$<br>$= 519$<br>b. $(7 + 8)^3$<br>$= 15^3$<br>$= 15 \times 15 \times 15$<br>$= 3,375$ | 6.EE.1   |

## Order of Operations Worksheet | Grades 6 to 8 | Answers

| Question number | Question   | Answers  | Standard |
|-----------------|--|--|----------|
| 19              | a. $6^3 + 24 - 2 \times 18 = \underline{\hspace{2cm}}$<br>b. $6^3 + 24 - (2 \times 18) = \underline{\hspace{2cm}}$         | a. $6^3 + 24 - 2 \times 18$<br>$= 216 + 24 - 2 \times 18$<br>$= 216 + 24 - 36$<br>$= 240 - 36$<br>$= 204$<br>b. $6^3 + 24 - (2 \times 18)$<br>$= 6^3 + 24 - 36$<br>$= 216 + 24 - 36$<br>$= 240 - 36$<br>$= 204$  | 6.EE.1   |
| 20              | a. $5.4^2 - 2.1 \times 9 + 4.7 = \underline{\hspace{2cm}}$<br>b. $(5.4^2 - 2.1) \times 9 + 4.7 = \underline{\hspace{2cm}}$ | a. $5.4^2 - 2.1 \times 9 + 4.7$<br>$= 29.16 - 2.1 \times 9 + 4.7$<br>$= 29.16 - 18.9 + 4.7$<br>$= 10.26 + 4.7$<br>$= 14.96$<br>b. $(5.4^2 - 2.1) \times 9 + 4.7$<br>$= (29.16 - 2.1) \times 9 + 4.7$<br>$= 27.06 \times 9 + 4.7$<br>$= 243.54 + 4.7$<br>$= 248.24$ | 6.EE.1   |

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