

### 6.EE.A.2 Order of Operations 1b

- 1 On February 18, from 9 a.m. until 2 p.m., the temperature rose from  $-14^{\circ}\text{F}$  to  $36^{\circ}\text{F}$ . What was the total increase in temperature during this time period?
- 2 What is the first step in simplifying the expression  $(2 - 3 \times 4 + 5)^2$ ?
- 3 If the expression  $3 - 4^2 + \frac{6}{2}$  is evaluated, what would be done *last*?
- 4 The expression  $15 - 3[2 + 6(-3)]$  simplifies to
- 5 The expression  $-|-7|$  is equivalent to
- 6 The value of the expression  $|-20| - |6|$  is
- 7 An expression equivalent to  $3!$  is
  - 1)  $3 \cdot 3$
  - 2)  $3 \cdot 2 \cdot 1$
  - 3)  $3 \cdot 3 \cdot 3$
  - 4)  $-3$
- 8 The value of  $5!$  is
- 9 The value of  $\frac{7!}{3!}$  is
- 10 What is the value of  $\frac{8!}{4!}$ ?
- 11 What is the value of  $\left| \frac{4(-6) + 18}{4!} \right|$ ?
- 12 The value of the expression  $6! + \frac{5!(3!)}{4!} - 10$  is

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### Answer Section

1 ANS:

50°

$$36 - (-14) = 50$$

REF: 010403a

2 ANS:

multiply 3 by 4

Using the acronym PEMDASLR indicates that operations inside the expression's parentheses should be performed first. Multiplication precedes addition.

REF: 080612a

3 ANS:

adding

Using the acronym PEMDASLR indicates that addition and subtraction operations should be performed from left to right. Since the addition is to the right of the subtraction, the addition would be done last.

REF: 060314a

4 ANS:

63

$$15 - 3[2 + 6(3)] = 15 - 3[2 + (-18)] = 15 - 3[-16] = 15 + 48 = 63$$

REF: 060217a

5 ANS:

-7

$$-|-7| = -(+7) = -7$$

REF: 010518a

6 ANS:

14

REF: 081402ia

7 ANS: 2

REF: 060814a

8 ANS:

120

$$5! = 5 \times 4 \times 3 \times 2 \times 1 = 120$$

REF: 080107a

9 ANS:

840

$$\frac{7!}{3!} = \frac{7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1}{3 \times 2 \times 1} = 840$$

REF: 080503a

10 ANS:

1,680

$$\frac{8!}{4!} = \frac{8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1}{4 \times 3 \times 2 \times 1} = 1,680$$

REF: 060605a

11 ANS:

 $\frac{1}{4}$ 

$$\left| \frac{4(-6) + 18}{4!} \right| = \left| \frac{-6}{24} \right| = \frac{1}{4}$$

REF: 081220ia

12 ANS:

740

$$6! + \frac{5!(3!)}{4!} - 10 = 720 + 5(6) - 10 = 740$$

REF: 061309ia