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4.OA.A.3 Order of Operations and Problem Solving

4.OA.A.3: Solve multistep word problems posed with whole numbers using the four operations.

1. Find the value of each expression. Make sure that you use correct order of operation.

   a. $2 \times 8 - 9 \div 3 + 6$
   b. $11 \times 7 - 60 + 44 \div 4$
   c. $35 - 3 \times 9 + 18$
   d. $12 \times 1 - 18 \div 2 + 13$
   e. $56 \div 8 - 3 + 4 \times 6$
   f. $80 \div 8 + 36 \div 9 \times 2$
   g. $6 \times 7 \div 14 \times 3 - 5$
   h. $15 + 30 \div 3 \times 5 - 2 \times 13$

   Solution:
   a. _____
   b. _____
   c. _____
   d. _____
   e. _____
   f. _____
   g. _____
   h. _____

2. Barry gets his clothes washed for $15. He buys 3 packs of detergent. He pays $40 and get $7 back. What was the price of a pack of detergent?

   Solution:

3. Luna pays $15 per month for her telephone bill. On average, she makes an extra call for $2 every month. How much does she pay in a year?

   Solution:

4. Samantha is sewing handkerchiefs. For first four days, she sewed 6 handkerchiefs each day. For next three days, she sewed 8 handkerchiefs each day. How many handkerchiefs did she sew in the whole week?

   Solution:

5. Derik started a business. He purchased 15 pillows online for $4 each. He sold all these pillows in their village and made a profit of $30. How much did he sell each pillow for?

   Solution:

6. Father buys 3 packs of paper towels for $5 each. He also buys 4 cans of milk for $2 each. He pays with two $10 and one $5 bill. How much money does he have left?

   Solution:

7. Carlo orders 2 coffees for $5 each and 5 slices of cake for $8 each. Which expression shows the money he spent?
   A. $2 + 8 \times 5 + 8$ C. $2 + 5 + 5 + 8$
   B. $2 \times 5 + 5 \times 8$ D. None of the above

   Solution:

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Answer Key

1. Find the value of each expression. Make sure that you use correct order of operation.

   a. $2 \times 8 - 9 \div 3 + 6$
   b. $11 \times 7 - 60 + 44 \div 4$
   c. $35 - 3 \times 9 + 18$
   d. $12 \times 1 - 18 \div 2 + 13$
   e. $56 \div 8 - 3 + 4 \times 6$
   f. $80 \div 8 + 36 \div 9 \times 2$
   g. $6 \times 7 \div 14 \times 3 - 5$
   h. $15 + 30 \div 3 \times 5 - 2 \times 13$

   Solution:
   a. $16 - 3 + 6 = 13 + 6 = 19$
   b. $77 - 60 + 11 = 17 + 11 = 28$
   c. $35 - 27 + 18 = 8 + 18 = 26$
   d. $12 - 9 + 13 = 3 + 13 = 16$
   e. $7 - 3 + 24 = 4 + 24 = 28$
   f. $10 + 4 \times 2 = 10 + 8 = 18$
   g. $42 \div 14 \times 3 - 5 = 3 \times 3 - 5 = 4$
   h. $15 + 10 \times 5 - 26 = 15 + 50 - 26 = 39$

2. Barry gets his clothes washed for $15. He buys 3 packs of detergent. He pays $40 and get $7 back. What was the price of a pack of detergent?

   Solution:
   $(40 - 7 - 15) \div 3 = 18 \div 3 = 6$
   Answer: $6

3. Luna pays $15 per month for her telephone bill. On average, she makes an extra call for $2 every month. How much does she pay in a year?

   Solution:
   $12 \times (15 + 2) = 12 \times 17 = 204$
   Answer: $204

4. Samantha is sewing handkerchiefs. For first four days, she sewed 6 handkerchiefs each day. For next three days, she sewed 8 handkerchiefs each day. How many handkerchiefs did she sew in the whole week?

   Solution:
   $4 \times 6 + 3 \times 8 = 24 + 24 = 48$
   Answer: 48 handkerchiefs

5. Derik started a business. He purchased 15 pillows online for $4 each. He sold all these pillows in their village and made a profit of $30. How much did he sell each pillow for?

   Solution:
   $(15 \times 4 + 30) \div 15 = 90 \div 15 = 6$
   Answer: $6

6. Father buys 3 packs of paper towels for $5 each. He also buys 4 cans of milk for $2 each. He pays with two $10 and one $5 bill. How much money does he have left?

   Solution:
   $(2 \times 10 + 5) - (3 \times 5 + 4 \times 2)$
   $25 - 23 = 2$; Answer: $2

7. Carlo orders 2 coffees for $5 each and 5 slices of cake for $8 each. Which expression shows the money he spent?
   A. $2 + 8 \times 5 + 8$
   B. $2 \times 5 + 5 \times 8$
   C. $2 + 5 + 5 + 8$
   D. None of the above

   Solution:
   B. $2 \times 5 + 5 \times 8$