

Summer 05 PreAlgebra Evaluation

MTY Academy

Summer 05-PreAlgebra

1. Perform the indicated operation. Show your work step by step.

(1) $-25 - (-9) + (-19)$
(2) $27 - (-26) - (-2)$
(3) $(-9) + (-15) - (-5)$
(4) $(-27) + (-12) - (-29)$
(5) $34 + (-26) - (-22) + (-16)$

2. Find each product. Show your work step by step.

(1) $(-7) \times (-31)$
(2) $(-17) \times 5$
(3) $3 \times (-8) \times (-4)$
(4) $(-5) \times 7 \times (-11)$
(5) $(-2) \times (-3) \times (-7) \times (-9)$

3. Perform the indicated operations. Show your work step by step.

(1) $(-10) + (-9) \times (-7) + (-19)$
(2) $6 \times (-14) - (-8) \times (-7)$
(3) $8 \times [(-4) - 9] - (-9)$
(4) $3 - (-9) \times (-5) + (-29)$

4. Perform the indicated operations. **SHOW YOUR WORK!**

(1) $-25 - (-111) \div (-3)$
(2) $-72 \div (-9) + (-58)$
(3) $-8 - (-132) \div 6$
(4) $[-168 \div 6 + (-22)] \times (-3)$
(5) $[-14 + (-21)] \div [-19 - (-14)]$

5. Use the Distributive law to do each of the following products. Show your work in detail.

(1) $23 \times 101 =$

(2) $46 \times (-99) =$

(3) $(-38) \times 102 =$

6. Use the Distributive law to do each of the following problems. Show your work in detail.

(1) $(-36) \times 36 + (-36) \times 64$

(2) $(-34) \times 46 - (-34) \times 145$

7. The lowest temperature ever recorded in city A was $-28^{\circ}F$. The lowest temperature recorded in city B was $-53^{\circ}F$.

(1) Draw a number line to locate the temperatures.

(2) Find the difference between the temperature in city A and the temperature in city B.

8. Wendy lost 1.5 pounds a week. At this rate, how many pounds did she lose in 6 weeks? Use negative numbers to model this problem and write down a mathematical expression to figure it out.
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9. Use the divisibility rule to determine which of the following numbers is divisible by 9. Give reasons to support your answer.

(1) 18963

(2) 3571

10. Use the divisibility rule to determine which of the following numbers is divisible by both 2 and 3. Give reasons to support your answer.

(1) 18954

(2) 4472

11. For the following sentence, **use** a letter such as x , y , or a to denote an unknown number, **write** an equation for the sentence, and finally **solve** the equation.

- (1) *7 more than a number is 14.*
 - (2) *6 less than twice a number is 3 more than the number.*
 - (3) *The length of a rectangle is 3 less than twice the width.*
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12. **Solve** each of the following equations. **Verify** your answers.

- (1) $8x - 5 = 3 + 7x - (-7)$
 - (2) $3 + 9x + (-7) = 6x - (-8)$
 - (3) $2 + (-4x) - (-8) = 15 - 5x$
 - (4) $5 + 10x + (-2) = 8x - (-11)$
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13. Write each fraction as a mixed number.

- (1) $-\frac{34}{5}$
 - (2) $-\left(-\frac{220}{15}\right)$
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14. Write each mixed number as an improper fraction. Your final answers must be in lowest terms.

- (1) $-5\frac{5}{11}$
 - (2) $-\left(-4\frac{4}{24}\right)$
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15. Twice a number is 3 less than three times the number. What is the number?(Use the four-step procedure.)
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16. If the sum of two consecutive integers is 213, what are the integers? (Use the four-step procedure.)
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17. If the perimeter of a square is 8 more than the length of one side of the square, what is the length of a side of the square? (Use the four-step procedure.)