

LEVEL: EMERGING

Directions: Evaluate the expression.

1) $16 \div 8 \cdot 5$

2) $7^2 - 24 \div 3$

3) $5 + 1.2 \div 0.3$

4) $(11 + 15) \cdot 2$

5) $3x^4 - 5$ when $x = 5$.

6) $14 \div 2 - 3 + 11 \cdot y$ when $y = -2$

LEVEL: PROFICIENT

Directions: Evaluate the following expressions.

7) $9\left(\frac{1}{3}\right)^2 - 4$

8) $12(5 - 4.5)^2 - 3.5$

9) $\frac{5a}{a-6}$ when $a = 8$

10) During a bowling tournament, you bowled three games with scores of 110, 130, and 129, respectively. Your average bowling score is given by $\frac{110+130+129}{3}$. What is your average score?

11) Determine if the expression was evaluated correctly. If not, find and correct the error.

$$\begin{aligned} 80 - \frac{1}{3}(15)^2 &= 80 - 5^2 \\ &= 80 - 25 \\ &= 55 \end{aligned}$$

12) You are creating a flower arrangement for a friend. The total cost (in dollars) for one vase and f flowers is given by the expression $8 + 2.5f$. How much will it cost to make an arrangement with 8 flowers?

13) You and two friends split a large pizza where the total amount paid (in dollars) is given by the expression $3p + 7.25$ where p is the amount you each paid. If you each paid \$4.25, how much was the pizza?

LEVEL: MASTERY

14) $8[30 - (9 - 6)]$

15) $\frac{1}{3}[30 - (9 - 10)^2]$

16) $\frac{b^3-15}{4b+10}$ when $b = 5$

17) You are decorating the perimeter of the ceiling of your living room with molding. The expression $2x + 2y$ represents the total amount of molding needed where x is the width and y is the length (both in feet). Find the total amount of wood needed if the room is 11 feet wide and 10.5 feet long.

18) Jeff was thirsty and was curious about how much pop was left in a can of Pepsi. The expression $\pi r^2 h$ where r is the radius (from the center of the can to the edge) and h is the height. If the can has a height of 7 in and a radius of 3 in, what is the volume of the can?

19) The regular shipping fee (in dollars) for a pair of shoes you want shipped to you is given by the expression $45.99 + 0.5w$ where w is the weight of the shoes. The express shipping fee for the shoes is given by the expression $45.99 + 0.99w$. How much do you save using regular shipping if the shoes you want are 1.5 lbs?

20) Tyler wanted to get in shape so he set up a weekly exercise plan. The number of miles he walks is given by the expression $7m + 2(5k)$ where m is the number of miles he walked in week 1 and k is the number of miles he walked in weeks 2 and 3.

a) If Tyler walked 7 miles the first week and 5 miles in weeks 2 and 3, how many did he walk total?

b) How many more miles would Tyler need to walk in the following weeks to reach 200 miles?

Worksheet 1.1A Answers

1. 10
2. 41
3. 9
4. 52
5. 1870
6. -18
7. -3
8. $-\frac{1}{2}$
9. 20
10. 123
11. It was not evaluated correctly. The student multiplied the 15 and the $\frac{1}{3}$ first before squaring the 15.
12. \$28
13. \$20
14. 216
15. $\frac{29}{3}$
16. $\frac{11}{3}$
17. 43 feet
18. 197.92 in^3
19. 74 cents
20.
 - a. 99 miles
 - b. 101 miles