

1.2 Order of Operations

Name: Key

Evaluate each expression.

18. $35 - 3 \cdot 8$

$35 - 24$

$\boxed{11}$

19. $18 \div 9 + 2 \cdot 6$

$2 + 12$

$\boxed{14}$

20. $10 + 8^3 \div 16$

$10 + 512 \div 16$

$10 + 32$

$\boxed{42}$

21. $24 \div 6 + 2^3 \cdot 4$

$4 + 8 \cdot 4$

$4 + 32$

$\boxed{36}$

22. $(11 \cdot 7) - 9 \cdot 8$

$77 - 72$

$\boxed{5}$

23. $29 - 3(9 - 4)$

$29 - 3(5)$

$29 - 15$

$\boxed{14}$

24. $(12 - 6) \cdot 5^2$

$6 \cdot 25$

$\boxed{150}$

25. $3^5 - (1 + 10^2)$

$243 - (1 + 100)$

$243 - 101$

$\boxed{142}$

26. $108 \div [3(9 + 3^2)]$

$108 \div [3(9 + 9)]$

$108 \div [3(18)]$

$108 \div (54)$

$\boxed{2}$

27. $[(6^3 - 9) \div 23]4$

$[(216 - 9) \div 23]4$

$(207 \div 23)4$

$(9)4$

$\boxed{36}$

28. $\frac{8 + 3^3}{12 - 7}$

$\frac{8 + 27}{5}$

$\frac{35}{5}$

$\frac{35}{5}$

$\boxed{7}$

29. $\frac{(1 + 6)9}{5^2 - 4}$

$\frac{7(9)}{25 - 4}$

$\frac{63}{21} = \boxed{3}$

Evaluate each expression if $g = 2$, $r = 3$, and $t = 11$.

31. $7 - gr$

$7 - 2(3)$

$7 - 6$

$\boxed{1}$

32. $r^2 + (g^3 - 8)^5$

$3^2 + (2^3 - 8)^5$

$9 + (8 - 8)^5$

$9 + (0)^5$

$9 + 0$

$\boxed{9}$

35. $3g(g + r)^2 - 1$

$3(2)(2 + 3)^2 - 1$

$6(5)^2 - 1$

$6(25) - 1$

$150 - 1$

$\boxed{149}$

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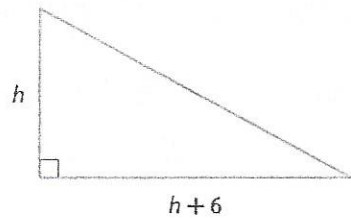
Name: _____

$$A = \frac{1}{2}bh$$

36. **GEOMETRY** Write an algebraic expression to represent the area of the triangle. Then evaluate it to find the area when $h = 12$ inches.

$$A = \frac{1}{2}(h)(h+6) = 6(18)$$

$$= \frac{1}{2}(12)(12+6) \quad \boxed{A = 108 \text{ u}^2}$$



38. **CCSS STRUCTURE** Kamilah sells tickets at Duke University's athletic ticket office. If p represents a preferred season ticket, b represents a blue zone ticket, and g represents a general admission ticket, interpret and then evaluate the following expressions.

Duke University Football Ticket Prices	
Preferred Season Ticket	\$100
Blue Zone	\$80
General Admission	\$70

a. $45b$

$$45(80)$$

$$\boxed{\$3600}$$

b. $15p + 35g$

$$15(100) + 35(70)$$

$$1500 + 2450$$

$$\boxed{\$3950}$$

c. $6p + 11b + 22g$

$$6(100) + 11(80) + 22(70)$$

$$600 + 880 + 1540$$

$$\boxed{\$3020}$$

Source: Duke University

58. **FINANCIAL LITERACY** A sales representative receives an annual salary s , an average commission each month c , and a bonus b for each sales goal that she reaches.

- a. Write an algebraic expression to represent her total earnings in one year if she receives four equal bonuses.
- b. Suppose her annual salary is \$52,000 and her average commission is \$1225 per month. If each of the four bonuses equals \$1150, what does she earn annually?

a) $s + 12c + 4b$

b) $52000 + 12(1225) + 4(1150)$

$$52000 + 14700 + 4600$$

$$\boxed{\$71,300}$$

59. **ERROR ANALYSIS** Tara and Curtis are simplifying $[4(10) - 3^2] + 6(4)$. Is either of them correct? Explain your reasoning.

Tara

$$[4(10) - 3^2] + 6(4)$$

$$= [4(10) - 9] + 6(4)$$

$$= 4(1) + 6(4)$$

$$= 4 + 6(4)$$

$$= 4 + 24$$

$$= 28$$

Curtis

$$[4(10) - 3^2] + 6(4)$$

$$= [4(10) - 9] + 6(4)$$

$$= (40 - 9) + 6(4)$$

$$= 31 + 6(4)$$

$$= 31 + 24$$

$$= 55$$

Curtis is correct. Tara subtracted before she multiplied.