2. Write an algebraic expression for *the difference of 5 and n cubed.*   **2.** _____

$$5 - n^3 \nearrow$$

3. Evaluate $2x + 5y^2 - 3z$ if $x = 6$, $y = 4$, and $z = 7$.   **3.** _____

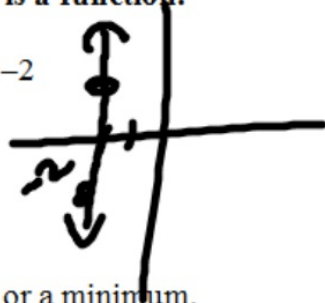**4.** Name the property used in the equation $1 = 6n$. Then find the value of n.   **4.** _____

③ $2(6) + 5(4)^2 - 3(7)$ ④ (mult. inverse)

$12 + 5(16) - 21$

$12 + 80 - 21$ 71

$92 - 21 =$

$1 = 6n$

$\dfrac{1}{6} = \dfrac{6n}{6}$

$n = \frac{1}{6}$

For Questions 9-10, determine whether each relation is a function.

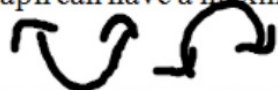**9.** $\{(1, 5), (2, 4), (3, 5), (4, 9)\}$ **10.** $x = -2$

9. __function__

10. Not a function

11. If $f(n) = 6 - 2n$, find $f(-1)$.

$f(-1) = 6 - 2(-1) = 6 + 2 = 8$

11. $f(-1) = 8$

12. *True* or *False*: A linear graph can have a maximum or a minimum.

12. False

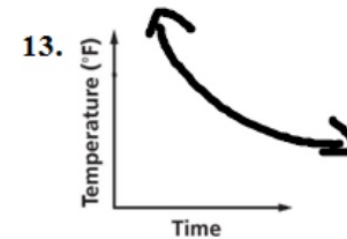**13.** Draw a reasonable graph showing the relationship between the temperature   **13.** ⊡ †

13. Draw a reasonable graph showing the relationship between the temperature of a pizza as it is removed from an oven and placed on a counter at room temperature, and time.

14. The sides of an equilateral triangle measure $(2x + 4)$ units. What is the perimeter?

$$3(2x+4)$$

15. Translate $m^2 - 4 = 2r + 1$ into a sentence.

13.

Temperature (°F) vs Time

14. $6x + 12$

15. _____

For Questions 5-7, simplify each expression.

5. $2t^2 + 5t^2 + 3t$ $= 7t^2 + 3t$

6. $7(r + 2t) - 5t$

$7r + 14t - 5t = 7r - 9t$

7. $5(4a + b) + 3a + b$

$20 + 5b + 3a + 1b = 23a + 6b$

8. Find the solution set for $3b - 4 = 8$ if the replacement set is $\{1, 2, 3, 4, 5\}$.

For Questions 9-10, determine whether each relation is a function.

5. _____

6. _____

7. _____

8. _____

9. _____

21. $3(c+3)-13+2(2c-1)$

21. _____

22. $10(a+1)-14a=9-(4a-1)$

22. _____

[handwritten work: crossed out box] $7(x+1)=(10)(3)$ solve for x... ☺

$7x+7=30$ ...☺

23. _____

For Questions 24 and 25, evaluate each expression if $a=3$, $b=4$, and $c=9$.

24. $2|a-b|+|c|$

[handwritten: $2|3-4|+|9|$ $\sim 2|-1|+9$ $2(1)+9=2+9$ $=11$]

24. _____

25. $c-b|1-a|$

[handwritten: $9-4|1-3|$ $9-4|-2|=9-4(2)$ $=9-8$ $=1$]

25. _____

26. Solve $|2x-1|=5$. Then graph the solution set.

[handwritten: $2x-1=5$ $2x=6$ $2x-1=-5$ $x=-2$ $x=3$ $2x=-4$]

26. $x=-2,3$

[number line from -3 to 8 with points at -2 and 3]

27. Determine whether $\frac{4}{9}$ and $\frac{20}{45}$ are equivalent ratios. Write *yes* or *no*.

[handwritten: $5 \cdot \frac{20}{45} = \frac{20}{25}$]

27. yes;

28. A magazine is on sale for 15% off the original price. If the original price of the magazine is \$4.60, what is the discounted price?

[handwritten: $.85(4.60)$]

28. _____

29. Solve $\frac{t-v}{r}=k$, for v.

29. _____

19. $\dfrac{a}{2} + 9 = 30$

$-9 \rbrace$ $\;\;2 \cdot \dfrac{a}{2} = 21 \cdot 2$

$a = 42$

20. $-\dfrac{2}{7}x = -16$

21. $5(c + 3) = 15 + 2(2c - 1)$

$5c + 15 = 15 + 4c - 2$

$\begin{cases} 5c + 15 = 13 + 4c \\ -4c \quad -15 \quad -15 \; -4c \end{cases}$

$c = -2$

22. $10(a + 1) - 14a = 9 - (4a - 1)$

29. Solve $\dfrac{t - v}{r} = k$, for v.

$t - v = kr$
$-t \qquad -t$

$\dfrac{-v = kr - t}{-1} \quad \dfrac{}{-1} \; \dfrac{}{-1}$

$v = -kr + t$

30. How many pounds of peanuts costing $3.00 a pound should be mixed with 4 pounds of cashews costing $4.50 a pound to obtain a mixture costing $3.50 a pound?

$x = \text{peanuts} \quad 4 = \text{cashews}$

$3x + 4(4.50) = (x + 4)(3.5$

$x = 8 \text{ pounds}$

19. $\underline{\;a = 42\;}$

20. _____

21. $\underline{\;c = -2\;}$

22. _____

29. $\underline{\;v = -kr + t\;}$

30. _____