Bellwork:

Find distance, midpoint, & slope: $(-9, 0)$ $(1, -24)$

Distance:

$$\sqrt{(-9-1)^2 + (0--24)^2}$$

$$\sqrt{(-10)^2 + (24)^2}$$

$$\sqrt{100 + 576}$$

$$\sqrt{676}$$

$$26$$

Midpoint: $\left(\frac{-9+1}{2}, \frac{0+-24}{2}\right)$

$\left(\frac{-8}{2}, \frac{-24}{2}\right)$

$(-4, -12)$

$(-9, 0)$

$(1, -24)$

Slope $\frac{-24-0}{1-(-9)} = \frac{-24}{10} =$

$\boxed{\frac{-12}{5}}$

p. 14 evens

(4) integer: $\mathbb{Z}$
Rational: $\mathbb{Q}$
Real: $\mathbb{R}$

(6) $\mathbb{Q}, \mathbb{R}$

(8) Associative Addn

(10) Additive Inv: 8
Mult. Inv. $-\frac{1}{8}$

(12) $-1.5, \frac{2}{3}$

(14) 13p

(16) $-17a - 1$

(20) $\mathbb{R}, \mathbb{Q}$

(22) $\mathbb{R}, \mathbb{Q}$

(24) $\mathbb{R}, \mathbb{Q}, \mathbb{Z}$

(26) Irr., $\mathbb{R}$

(28) add. Inv

(30) add. Iden.

(32) Comm +

(49) Distr. (50) $10x+2y$

(52) $11m+10a$

(54) $32c-46d$

(56) $4.4p-2.9q$

$$2\left(\frac{3}{4}\right)(-8)^2+\left(3^3-(-2)\right)$$

$$96-(27+2)$$

$$96-29$$

$$67$$

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See Examples
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Name the sets of numbers to which each number belongs. 19–26. See margin.

19. 0
20. $-\frac{2}{9}$
21. $\sqrt{121}$
22. -4.55
23. $\sqrt{10}$
24. -31
25. $\frac{12}{2}$
★ 26. $\frac{3\pi}{2}$

★ 27. Name the sets of numbers to which all of the following numbers belong. Then arrange the numbers in order from least to greatest.
$2.\overline{49}$, $2.4\overline{9}$, 2.4, 2.49, $2.\overline{9}$ **Q, R; 2.4, 2.49, $2.\overline{49}$, $2.4\overline{9}$, $2.\overline{9}$**

Name the property illustrated by each equation. **31. Assoc. (+)**

28. $5a + (-5a) = 0$ **Add. Inv.**
29. $(3 \cdot 4) \cdot 25 = 3 \cdot (4 \cdot 25)$ **Assoc. (×)**
30. $-6xy + 0 = -6xy$ **Add. Iden.**
31. $[5 + (-2)] + (-4) = 5 + [-2 + (-4)]$
32. $(2 + 14) + 3 = 3 + (2 + 14)$ **Comm. (+)**
33. $\left(1\frac{2}{7}\right)\left(\frac{7}{9}\right) = 1$ **Mult. Inv.**
34. $2\sqrt{3} + 5\sqrt{3} = (2 + 5)\sqrt{3}$ **Dist.**
35. $ab = 1ab$ **Multi. Iden.**

NUMBER THEORY For Exercises 36–39, use the properties of real numbers to answer each question. **37. $-m$; Add. Inv. 38. $\frac{1}{m}$; Multi. Inv.**

36. If $m + n = m$, what is the value of n? **0**
37. If $m + n = 0$, what is the value of n? What is n called with respect to m?
38. If $mn = 1$, what is the value of n? What is n called with respect to m?
39. If $mn = m$, what is the value of n? **1**

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