

ASSIGNMENT

1-6 all

7-55 odd

1. Is zero a positive number, a negative number or neither?
Is zero an integer?

NEITHER, NO.

2. GIVE EXAMPLES OF REAL NUMBERS that are whole numbers, INTEGERS, RATIONAL NUMBERS, AND IRRATIONAL NUMBERS.

WHOLE NUMBERS: 0, 5, 1,000,000

INTEGERS: -1, 7

RATIONAL NUMBERS: $\frac{1}{4}$, $\frac{2}{3}$, $\frac{3}{2}$ IRRATIONAL NUMBERS: π , $\sqrt{2}$, $\sqrt{3}$

3. WHICH STATEMENT IS FALSE?

d. EVERY RATIONAL NUMBER IS AN INTEGER.

 $\frac{1}{2}$ IS A RATIONAL NUMBER, BUT IS NOT AN INTEGER.

4. LEON IS 16 AND NEESHA IS 18. WHICH IS FALSE?
L=16, N=18

d. (Leon's Age) > (Neesha's Age)

$$16 \neq 18$$

5. WHICH OF THE FOLLOWING ~~IS TRUE?~~ "ASSOCIATIVE PROPERTIES" ARE TRUE? EXPLAIN.

A. and C.

The ASSOCIATIVE Property is true for multiplication and addition.

$$(1+2)+3 = 1+(2+3)$$

$$6 = 6$$

$$(1 \cdot 2) \cdot 3 = 1 \cdot (2 \cdot 3)$$

$$6 = 6$$

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6. FIND THE UNIT MEASURE OF THE PRODUCT.

$$\left(\frac{3 \text{ pounds}}{\text{sq. in.}} \right) \left(\frac{144 \text{ sq. in.}}{1 \text{ sq. ft.}} \right) \left(\frac{1 \text{ ton}}{2000 \text{ lbs.}} \right) \left(\frac{\$25}{1 \text{ ton}} \right)$$

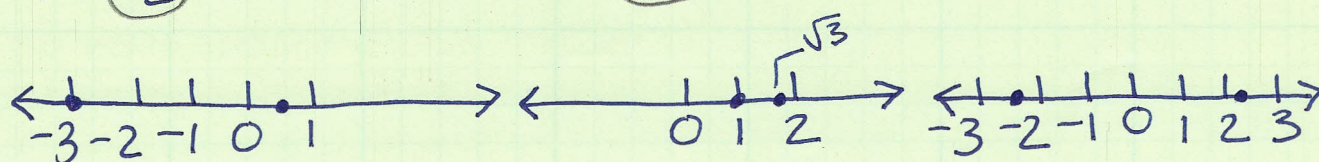
$$= \frac{\text{dollars}}{\text{sq. ft.}} \quad (\text{other units cancel})$$

PLOT NUMBERS ON A REAL NUMBERLINE THEN DECIDE WHICH IS GREATER.

7. $\frac{1}{2} \dot{>} -3$

9. $\sqrt{3} \dot{>} 1$

11. $-\frac{7}{3} \dot{>} \sqrt{5}$



WRITE NUMBERS IN DECREASING ORDER.

13. $1, -4, -\sqrt{3}, 9, \frac{1}{3}$

15. $-\frac{5}{2}, -\sqrt{5}, 4, 0, \frac{3}{2}$

$9, 1, \frac{1}{3}, -\sqrt{3}, -4$

$4, \frac{3}{2}, 0, -\sqrt{5}, -\frac{5}{2}$

STATE PROPERTY ILLUSTRATED.

17. $(2 \cdot 4) \cdot 9 = 2(4 \cdot 9)$ ASSOCIATIVE

19. $3 + 1 = 1 + 3$ COMMUTATIVE

21. $4 + (-4) = 0$ Additive Inverse

23. $2(3 + 12) = 2 \cdot 3 + 2 \cdot 12$ Distributive

25. $64 + -5 = 59$

27. $-18 - 6 = -24$

29. $12 \times 2 = 24$

31. $3 \div \frac{1}{2} = 6$

33. LIST COACHES IN DECREASING ORDER BASED ON WINS.

1. George Halas 319
2. Don Shula 269
3. Tom Landry 250
4. Earl Lambeau 226
5. Chuck Noll 177

6. Paul Brown 166
7. Bud Grant 158
8. Chuck Knox 155
9. Steve Owen 151
10. Hank Stram 131

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35. $T \downarrow 3^\circ$
 $1000 \text{ ft} \uparrow$ ASSUMING 60° AT SEA LEVEL, WHAT IS
 the temperature at 25,000 feet

$$25,000 \text{ ft} \times \frac{3^\circ}{1000 \text{ ft}} = 75^\circ \text{ drop}$$

$$60 - 75 = -15^\circ \text{ F AT } 25,000 \text{ ft ALT.}$$

DECIDE whether number is RATIONAL OR
 IRRATIONAL.

37. $.25 = \frac{25}{100} = \text{rational}$ 39. $\sqrt{7} = \text{irrational}$

41. $-2 \boxed{<} 1$ 43. $3 \boxed{<} \sqrt{10}$

45. -14 is opposite of 14

47. $\sqrt{5}$ is opposite of $-\sqrt{5}$

49. $-\frac{1}{31}$ is the reciprocal of -31

51. $-\frac{7}{5}$ is the reciprocal of $-\frac{5}{7}$

53. Find product $\frac{1}{3}$ unit of measure

$$\left(\frac{50 \text{ mi/hr}}{\text{hour}} \right) \left(\frac{5280 \text{ ft}}{\text{mile}} \right) \left(\frac{1 \text{ hour}}{3600 \text{ s}} \right) = \underline{\underline{73.3 \frac{\text{ft}}{\text{s}}}}$$

$$55. (0+6+3+2+0+2)3 + \frac{1}{3}9$$

$$(7+7+7+0+1) = \frac{22}{61}$$

$$70 - 61 = \underline{\underline{9}} \quad \underline{\underline{\text{checks}}}$$

SECTION 1.2

ALG 2

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ASSIGNMENT

1-6 all

7-63 odd

1. GIVE AN EXAMPLE OF AN ALGEBRAIC EXPRESSION FOR WHICH THE VALUE OF THE EXPRESSION IS POSITIVE REGARDLESS OF THE VALUE OF THE VARIABLE.

$$x^2 \quad \text{or} \quad 2x^2 + 5$$

2. DESCRIBE THE DIFFERENCE BETWEEN TERMS OF AN EXPRESSION AND THE FACTORS OF AN EXPRESSION.

Terms are added together while factors are multiplied.

ex.

3. IDENTIFY THE TERMS OF $6x^3 - 17x + 5$

$$\text{terms} = 6x^3, -17x, 5$$

4. FACTORS OF $10xy$.

$$10, x, y$$

5. Write a verbal description for $(x^3 + 1)^2$.

SQUARE THE SUM OF x -cubed and one.

6. Explain Order of Operation to evaluate: $3 - 8^2 \div 4 + 1$

Please Excuse My DEAR AUNT SALY.

1. $8^2 = 64$

2. $64 \div 4 = 16$

3. Left to right $3 - 16 + 1 = \underline{\underline{-12}}$

EVALUATE THE EXPRESSION.

7. $x - 5$ when $x = 3$

$$3 - 5 = \underline{\underline{-2}}$$

9. $50a - 2b + 6$, $a = 2$, $b = 20$

$$50(2) - 2(20) + 6 =$$

$$100 - 40 + 6 = \underline{\underline{66}}$$

11. $m + 2(m - 5)$ $m = 25$

$$25 + 2(25 - 5)$$

$$25 + 2(20)$$

$$25 + 40 = \underline{\underline{65}}$$

13. $2x \div (13 - 9y)$ $x = 14$, $y = \frac{1}{3}$

$$2(14) \div (13 - 9(\frac{1}{3}))$$

$$28 \div (13 - 3)$$

$$28 \div 10 = \frac{14}{5} = \underline{\underline{2\frac{4}{5}}}$$

or $\underline{\underline{2.8}}$

15. $(20a - 1) \div b$ when $a = 2$
 $b = 13$

$$(20 \cdot 2 - 1) \div 13$$

$$39 \div 13 = \underline{\underline{3}}$$

EVALUATE $12x \div (x - 1)$ for given value of x .

17. $x = 7$ $12(7) \div (7 - 1)$

$$84 \div 6 = \underline{\underline{14}}$$

19. $x = 3$ $12(3) \div (3 - 1)$

$$36 \div 2 = \underline{\underline{18}}$$

20. use a calculator to evaluate (round ~~to~~ ^{to} 2 decimal places)

21. $65.1z - .4$, $z = 1.2$

$$\underline{\underline{z = 77.72}}$$

23. $15(.5p + q)$ $p = 31.5$
 $q = .8$

$$15(.5 \cdot 31.5 + .8)$$

$$= \underline{\underline{248.25}}$$

22. WRITE Expressions using exponents.

25. y - squared = y^2

27. x to the third power
 x^3

29. $z \cdot z \cdot z \cdot z \cdot z \cdot z$

$$z^6$$

EVALUATE THE EXPRESSION.

31. S^2 $S = 12$

$= \underline{\underline{144}}$

33. $(2a)^2 + 4$, $a = 3$

$(2 \cdot 3)^2 + 4 = \underline{\underline{40}}$
 $6^2 + 4$

35. $11(b+d)^2$ when $b=1$ and $d=9$

$11(1+9)^2 = 11 \cdot 100 = \underline{\underline{1100}}$

37. $6 - 3 + 1 = \underline{\underline{4}}$

39. $20 \div 5 + 5 \cdot 4 =$

$4 + 20 = \underline{\underline{24}}$

41. $1 + 7 \cdot 4 - 5 =$

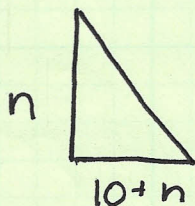
$1 + 28 - 5 = \underline{\underline{24}}$

43. $4 - (6 \cdot 2)^2 + 2 =$

$4 - (12)^2 + 2$

$4 - 144 + 2 = \underline{\underline{-142}}$

45. $n = 80$



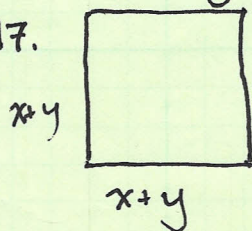
$\text{area} = \frac{1}{2}(10+n)(n)$

$= \frac{1}{2}(10+80)(80)$

$= \frac{1}{2} \cdot 90 \cdot 80 = 40 \cdot 90$

$\underline{\underline{3600 \text{ sq units}}}$

47. $x=10$ $y=3$



$\text{area} = (x+y)^2$

$= (10+3)^2$

$= 13^2 = \underline{\underline{169 \text{ sq units}}}$

49. $A = 2t + 25$

$P = 2.6t + 29$

1988 $\rightarrow t = 8$

$A = 2t + 25$

$= 2 \cdot 8 + 25 = \underline{\underline{\$41,000/\text{year}}}$

51. ratio of A to P

$$\frac{A}{P} = \frac{2t + 25}{2.6t + 29}$$

skip 53

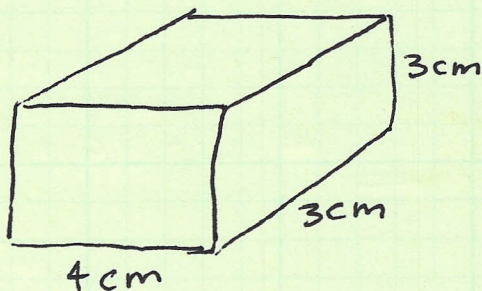
Calculator use, round to 2 decimals

55. $19.5 \div 6.4 = \underline{\underline{3.05}}$

57. $65.16 \cdot 0.27 = \underline{\underline{17.6}}$

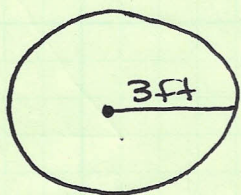
59. $8.05 \div .001 + 2 = \underline{\underline{8052}}$

61.



$$V = 4 \cdot 3 \cdot 3 = \underline{\underline{36 \text{ cm}^3}}$$

63.



$$\begin{aligned} V &= \frac{4}{3} \pi r^3 \\ &= \frac{4}{3} \pi (3)^3 = \underline{\underline{113.1 \text{ ft}^3}} \end{aligned}$$

INTRODUCTION TO GRAPHING CALCULATORS

1. ALPHA 2nd ^ darker
ALPHA 2nd v lighter

2. X,T,θ or ALPHA X

3. a 8 STO X,T,θ enter

- b. 21 STO ALPHA A ENTER

- c. (-) 6 STO ALPHA E ENTER

- d. 100 STO ALPHA L ENTER

- e. 2nd π STO ALPHA O

- f. 1.1 x² STO ALPHA U

4. 1728.77

5. $\overset{M}{O}, \overset{A}{21}, \overset{R}{O}, \overset{N}{O}, \overset{A}{21}$ etc.

6. MARNA + MARTEEN = 0 IT MEANS
 $M \times A \times R \times N \times A + M \times A \times R \times T \times E \times E \times N \times Y = 0$

7. 2nd ENTRY

8. O, still a Ø in each name

9. 42 (You know what it means if you have read Hitchhiker's GUIDE TO THE GALAXY)

10. a. 32

- d. 5.49

- b. 1005.31

- e. 5.43

- c. 148.78

- f. 7.0525

ENTER THIS

$$3.1 \times ((8.4 - (3.4 \cdot 1.4)) / 1.6)$$

11. 102.2° F

12. 21.1° C

Assignment

1-12

1. $4^2 = 16$

2. $\frac{7}{(-3-5)} = -.875$

3. $5^{-1} = \frac{1}{5} = .2$

4. $3 \times (5-2) = 9$

5. 397.44

6. -704.969

7. .184

8. 67.021

9. 15,379.913

10. 7.833

11. -.218

12. 6.759