

Table of Contents

About the Author ii

Introduction.....iii

Activities 1

Hints..... 65

Solutions 89


About the Author

Darin Beigie teaches mathematics at Harvard-Westlake School in Los Angeles, CA. He develops curriculum and classroom materials to foster greater critical thinking and creativity amongst his students. He publishes frequently in education and teaching journals. He is the author of other books by The Critical Thinking Co.™, including the award-winning *Mathematical Reasoning™ Middle School Supplement* (Grades 7-9), *Math Analogies* Level 3 (Grades 6-7) and Level 4 (Grades 8-9), the *Pattern Explorer* series (Grades 3-9), *Critical Thinking Detective™ – Math Beginning, Math* (Grades 5-12+), and the *Dare to Compare Math* series (Grades 2-7). Darin began his career with a Ph.D. in Theoretical Physics at the California Institute of Technology in Pasadena, CA, followed by a Research and Teaching Fellowship at Cornell University’s Center for Applied Mathematics in Ithaca, NY. Darin’s volunteer work at public middle schools inspired him to become a school teacher, and he has since taught middle school mathematics in New York, Massachusetts, and California.

Free resource from www.criticalthinking.com. Commercial redistribution prohibited

6. Rebus Wrestler

Each box represents a common phrase or word. Look at the appearance and arrangement of the letters, words, numbers, or images in the box to help you find the answer.

1. friends EVER EVER EVER EVER	2. EEEEEE E E E E EEEEEE	3. PAwalkRK	4. 777 777 7 7 7 7 7 7 7 7 7777 7777
5. temperatures	6. don't ↑ GIVE	7. Jack	8. once 
9. 99999 9 9 9 9	10. TIME SHOW	11. r e a d	12. TOUCH ↓
13. TIRE	14. SLPOASCTE	15. MAC	16. mind MATTER

17. Word Completion Conqueror

Each box contains five words that can be completed using the same two letters. For example, in question 1 the letters *C* and *H* complete the five words to give: *CHEW*, *CHAIR*, *CHESS*, *CHILD*, *CHAT*. For each box, find the two letters that complete the words.

1. C H EW
C H AIR
C H ESS
C H IL D
C H AT

2. _ _ RRY
 _ _ RLD
 _ _ UND
 _ _ OD
 _ _ NDER

3. _ _ ILL
 _ _ ING
 _ _ ORY
 _ _ AND
 _ _ ATE

4. _ _ ELF
 _ _ AKE
 _ _ INE
 _ _ OUT
 _ _ IELD

5. _ _ EE
 _ _ AUD
 _ _ OG
 _ _ OWN
 _ _ UIT

6. _ _ LLY
 _ _ LOW
 _ _ AST
 _ _ FORE
 _ _ ST

7. _ _ ASH
 _ _ OWD
 _ _ AZY
 _ _ EAM
 _ _ AFT

8. _ _ WN
 _ _ VE
 _ _ OR
 _ _ UBT
 _ _ ZEN

9. _ _ OWL
 _ _ AIN
 _ _ APE
 _ _ OUP
 _ _ EEN

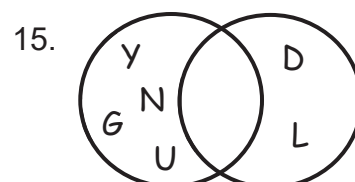
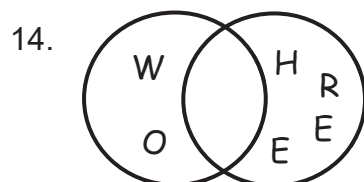
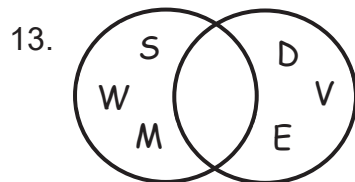
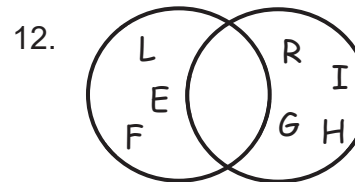
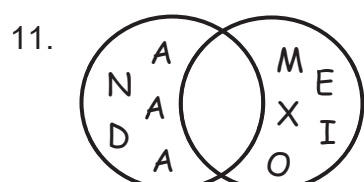
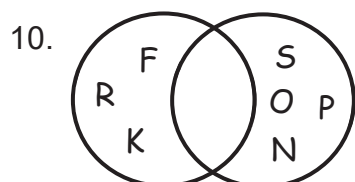
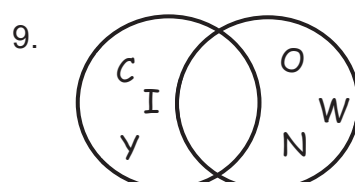
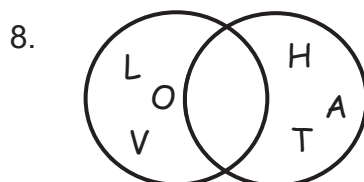
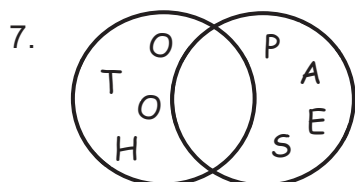
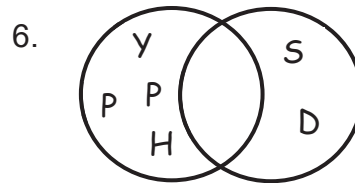
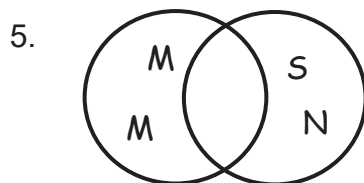
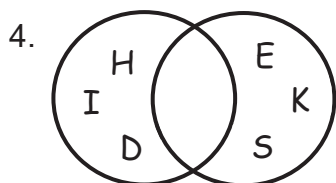
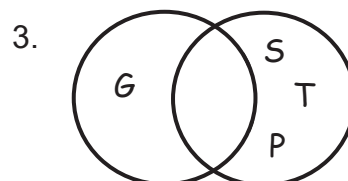
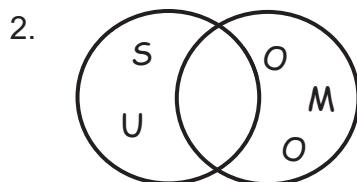
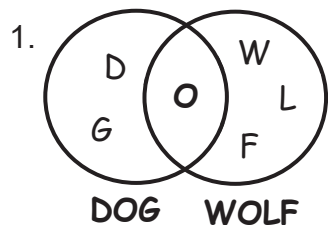
10. _ _ RDY
 _ _ IL
 _ _ CO
 _ _ STE
 _ _ BLE

11. _ _ INK
 _ _ IGH
 _ _ ERE
 _ _ IRD
 _ _ ICK

12. _ _ WER
 _ _ NIOR
 _ _ VEN
 _ _ LF
 _ _ LL

37. Circle Sleuth

Each circle contains the letters of a word. The center region is missing one letter. Find the missing letter and then determine each circle's word. Write the word below each circle. The first question is done as an example. *For each question, the two words are related by a theme.*



49. Cryptogram Captain

Each letter in the cryptogram is coded by a unique symbol. For example, in question 1 the letter B is represented by the symbol Ξ . Decode the cryptogram to solve the puzzle. *Each puzzle has a different code.*

1. The last names of eight Presidents of the United States are listed below. What are the names?

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
	Ξ																							\times	

- a. $\overline{\triangleleft} \overline{\dagger} \overline{\Sigma} \overline{**} \overline{\diamond} \overline{\triangleleft} \overline{\Sigma}$
- b. $\overline{\diamond} \overline{\Xi} \overline{\blacksquare} \overline{\Pi} \overline{\blacksquare}$
- c. $\overline{\star} \overline{\ominus} \overline{\pentagon} \overline{\pentagon} \overline{\ominus} \overline{\heartsuit} \overline{\Phi} \overline{\diamond} \overline{\Sigma}$
- d. $\overline{\heartsuit} \overline{\ominus} \overline{\blacksquare} \overline{\Psi} \overline{\blacksquare} \overline{\Sigma}$
- e. $\overline{+} \overline{\ominus} \overline{\Sigma} \overline{\Sigma} \overline{\ominus} \overline{\square} \overline{\overset{y}{\times}}$
- f. $\overline{\heartsuit} \overline{\diamond} \overline{\diamond} \overline{\Phi} \overline{\ominus} \overline{\triangleright} \overline{\ominus} \overline{\triangleleft} \overline{\boxtimes}$
- g. $\overline{\Xi} \overline{\times} \overline{\Phi} \overline{\uparrow}$
- h. $\overline{\smile} \overline{\blacksquare} \overline{\Phi} \overline{\uparrow} \overline{\dagger} \overline{\Sigma} \overline{\Psi} \overline{\boxtimes} \overline{\diamond} \overline{\Sigma}$

2. Eight colors are listed below. What are the colors?

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z

- a. $\overline{\checkmark} \overline{\bigcirc} \overline{\blacktriangle} \overline{\blacktriangle} \overline{\blacklozenge}$
- b. $\overline{\bigcirc} \overline{\blacktriangle} \overline{\heartsuit}$
- c. $\overline{\star} \overline{\Omega} \overline{\bigcirc} \overline{\star} \overline{\&} \overline{\blacktriangle}$
- d. $\overline{\blacktriangle} \overline{\bigcirc} \overline{\exists} \overline{\blacklozenge} \overline{\checkmark} \overline{\blacktriangle}$
- e. $\overline{\cloud} \overline{\blacktriangle} \overline{\&} \overline{\&} \overline{\blacktriangle} \overline{\lightning}$
- f. $\overline{\crescent} \overline{\bigcirc} \overline{\blacktriangle} \overline{\lightning} \overline{\blacklozenge}$
- g. $\overline{\star} \overline{\rightarrow} \overline{\blacklozenge} \overline{\square}$
- h. $\overline{\crescent} \overline{\&} \overline{\Omega} \overline{\blacktriangle}$