

SLOPES, STARS, SUPERNOVAE, AND STUFF - LEVEL 2

Locate each of the words on the grid below from the black hole word bank. Note the numerical coordinates of the first letter and the last letter of each word. Using the following formula:

$$S = \frac{y_2 - y_1}{x_2 - x_1}$$

where s = slope, y = the y coordinates, and x = the x coordinates, calculate the slope of the line that can be drawn between the endpoints for each word. NOTE: Words are allowed to bend! They are not just horizontal, vertical, and diagonal.

WORD BANK:

gravitational	accretion disk	binary
whirlpool	singularity	quasar
detect	supermassive	
fusion	event horizon	
companion	X-ray	

Y

20	q	a	e	r	t	y	i	o	p	k	m	j	g	v	z
19	q	g	e	f	j	k	a	x	g	p	l	r	i	h	w
18	p	o	r	l	s	d	t	v	o	c	a	s	u	u	m
17	z	x	a	a	c	v	b	o	n	h	c	g	f	e	y
16	w	e	r	t	v	h	l	j	k	l	o	p	o	i	n
15	a	q	w	s	x	i	c	v	b	h	m	u	i	i	a
14	i	s	k	s	i	u	t	n	d	r	p	h	b	k	r
13	d	s	d	i	c	b	o	a	n	j	a	q	w	e	y
12	n	k	p	n	o	i	u	n	t	b	n	c	z	a	w
11	o	s	b	g	s	t	h	k	o	i	i	p	l	m	c
10	i	x	l	u	w	s	c	f	t	y	o	a	c	n	g
9	t	z	f	l	a	r	i	t	y	r	n	n	a	r	x
8	e	w	k	a	d	v	b	n	m	k	o	p	a	k	w
7	r	s	j	q	s	d	r	t	u	j	m	y	b	l	s
6	c	x	b	b	r	t	r	a	s	s	u	h	h	i	e
5	c	c	v	f	c	g	a	s	a	m	r	e	p	u	s
4	a	h	s	e	f	e	s	d	u	f	h	m	t	y	t
3	q	y	t	w	y	i	c	r	q	a	b	v	g	f	n
2	a	e	e	e	v	y	j	t	j	m	n	g	f	o	b
1	d	f	t	e	v	e	n	t	h	o	r	i	z	g	u
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

X