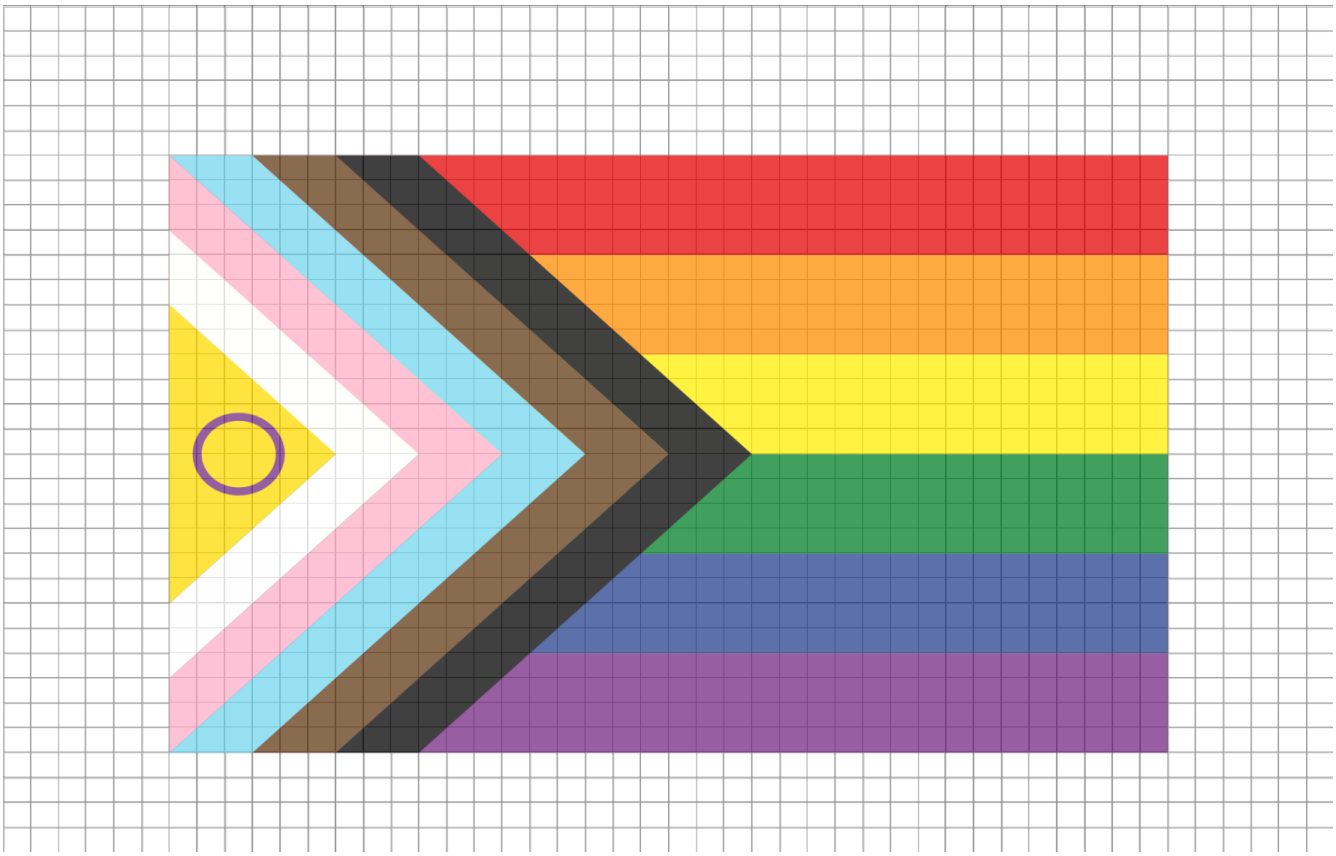
Coordinates Bingo (Pride Flag) Teacher Card

Caller App: https://www.geogebra.org/m/gay8zau3

Point	Called
$(-12, 18)$	
$(-12, -6)$	
$(24, -6)$	
$(24, 18)$	
$(-12, -2)$	
$(-12, 2)$	
$(-12, 6)$	
$(-12, 10)$	
$(-12, 14)$	
$(24, -2)$	
$(24, 2)$	
$(24, 6)$	
$(24, 10)$	
$(24, 14)$	
$(-12, 0)$	

Point	Called
$(-6, 6)$	
$(-12, 12)$	
$(-12, -3)$	
$(-3, -6)$	
$(-12, 15)$	
$(0, 6)$	
$(-9, -6)$	
$(3, 6)$	
$(-9, 18)$	
$(-6, -6)$	
$(6, 6)$	
$(-6, 18)$	
$(-3, -6)$	
$(9, 6)$	
$(-3, 18)$	

Progressive Pride Flag Math Lesson



Research the year the flag was designed and the meaning of each colour/symbol:

Year:	Purple circle:
Red	Yellow triangle
Orange	White
Yellow	Pink
Green	Light blue
Dark blue	Brown
Violet	Black

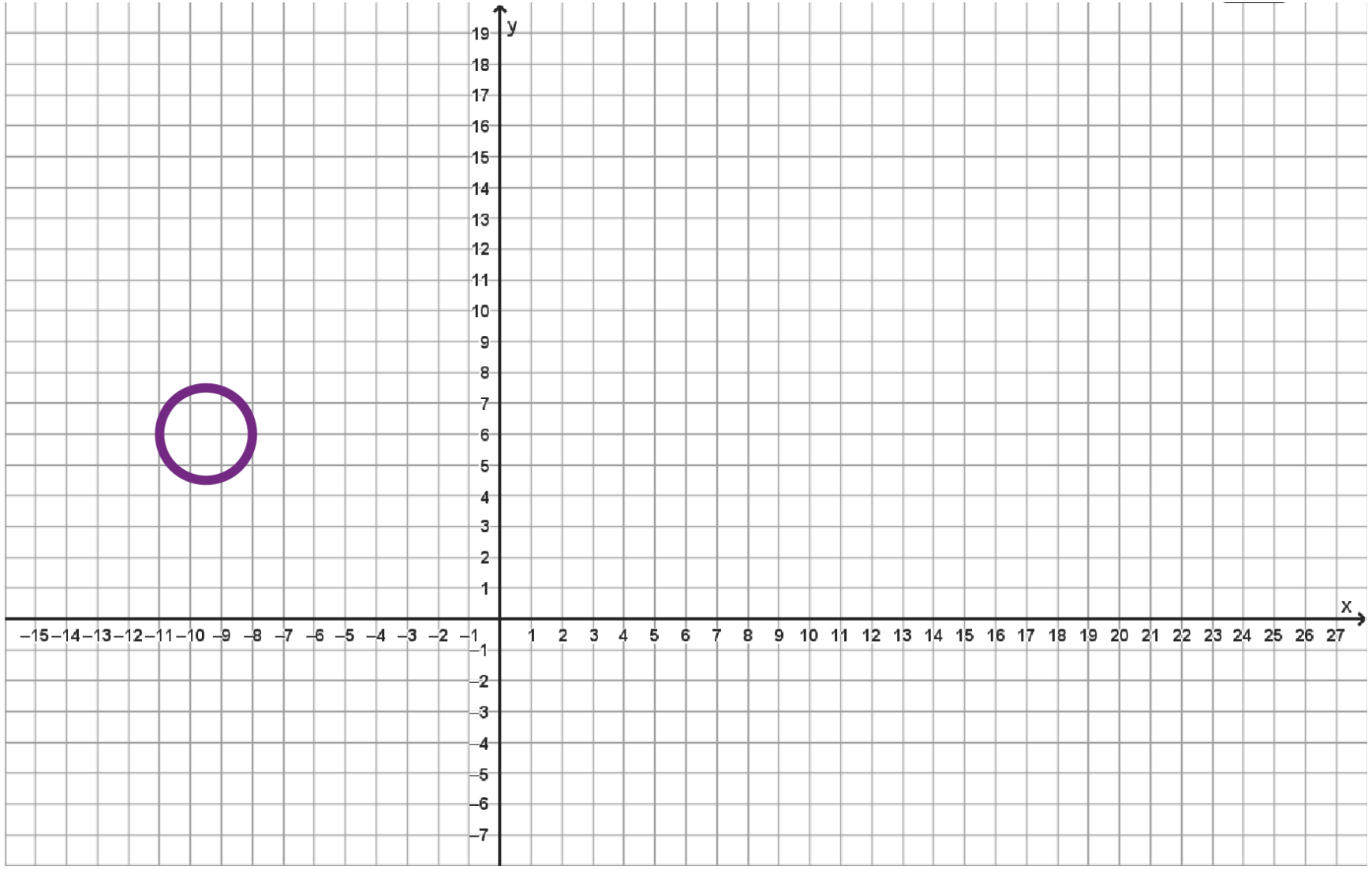
www. tentotwelvemath.com/interactive/

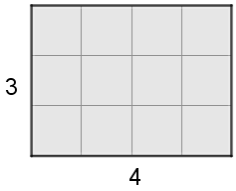
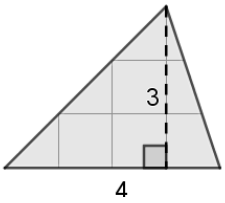
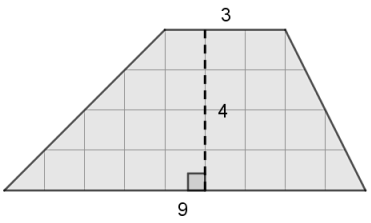
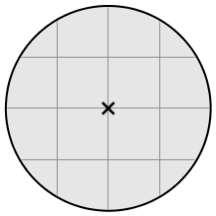
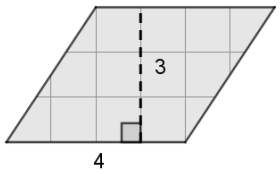
Coordinates: construct the Pride Flag

Plot the points on the axes to create each component of the pride flag, then colour in.

Flag Outline Join these four points to make a rectangle.	$(-12, 18)$ $(-12, -6)$ $(24, -6)$ $(24, 18)$
Red trapezoid	$(24, 14)$, $(24,18)$, $(-3,18)$, $(1,14)$
Orange trapezoid	$(24,10)$, $(24,14)$, $(1,14)$, $(5,10)$
Yellow trapezoid	$(24, 6)$, $(24, 10)$, $(5,10)$, $(9,6)$
Green trapezoid	$(24,2)$, $(24,6)$, $(9,6)$, $(5,2)$
Dark blue trapezoid	$(24, -2)$, $(24,2)$, $(5,2)$, $(1, -2)$
Purple trapezoid	$(24, -6)$, $(24, -2)$, $(1, -2)$, $(-3, -6)$

Yellow triangle	$(-12, 0)$ $(-6, 6)$ $(-12, 12)$
White chevron	$(-12, -3)$ $(-3, 6)$ $(-12, 15)$
Pink chevron	$(0, 6)$, $(-12, -3)$ $(-12,15)$
Pale blue chevron	$(-9, -6)$ $(3, 6)$ $(-9, 18)$
Brown chevron	$(-6, -6)$ $(6, 6)$ $(-6, 18)$
Black chevron	$(-3, -6)$ $(9, 6)$ $(-3, 18)$



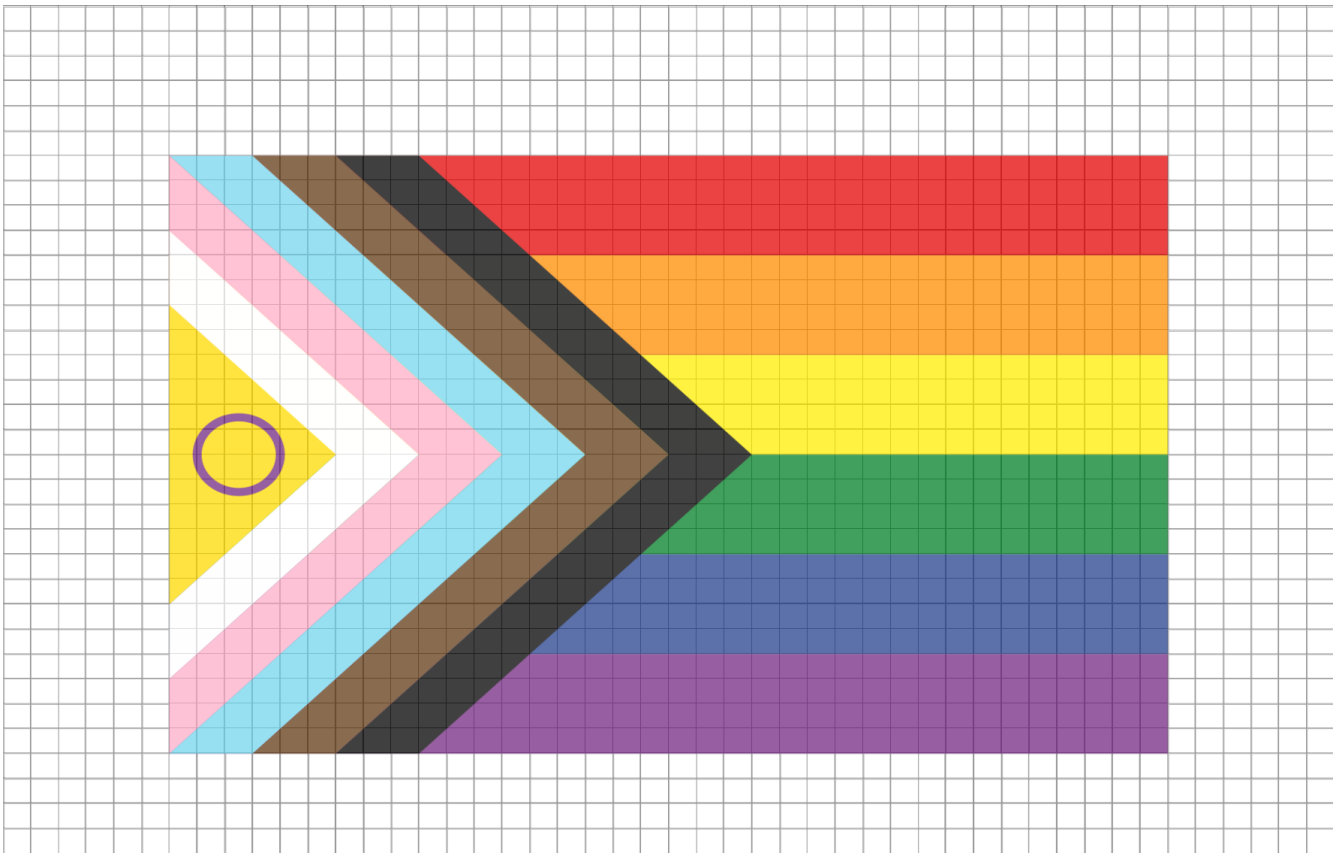
Area of a Rectangle:  Area = 12 squares. Area of a rectangle = length × width	Area of a triangle:  Area = 6 squares. Area of a triangle = base × height ÷ 2	Area of a Trapezoid  Area = 24 squares Area of a trapezoid = $(a + b) \times h \div 2$ Area = $(3 + 9) \times 4 \div 2$ Area = $12 \times 4 \div 2 = 24$ Formula is usually written: $A = \frac{a+b}{2} \cdot h$
Area of a Circle:  $A = \pi r^2$ $A = \pi \times 2 \times 2$ $A = 12.6$ squares	Area of a Parallelogram:  Area = 12 squares. Area parallelogram = base × height	

Use the formulas or count the squares on your flag to calculate the area of each part of the pride flag:

Whole flag	Red trapezoid	Orange trapezoid	Yellow trapezoid
Yellow triangle	White hexagon (chevron)	Pink hexagon (chevron)	Blue/brown/black hexagon

www. tentotwelvemath.com/interactive/

Progressive Pride Flag: Answer pages



Research the year the flag was designed and the meaning of each colour/symbol:

Year: 1978 By Gilbert Baker with developments in the years 1999, 2013, 2017, 2018, 2021	Purple circle: Intersex person as a whole person
Red: Life	Yellow triangle: Intersex
Orange: Healing	White: Non-binary, people outside of the gender binary
Yellow: Sun and light	Pink: Trans flag: people who identify as female
Green: Nature and serenity	Light blue: trans flag: people who identify as male
Dark blue: Harmony and peace	Brown and Black: LGBTQ2s+ People of colour. Additionally, representing those lost to HIV/Aids, those living with HIV/Aids and the stigma around the virus.
Purple: the human spirit	

The chevron represents a call for progress in the rights and protections of trans, non-binary, intersex and LGBTQ+ people of colour. Hence 'progress' flag.

Sources: https://fiertemontreal.com/en/resources/fierte-rassemble-drapeau

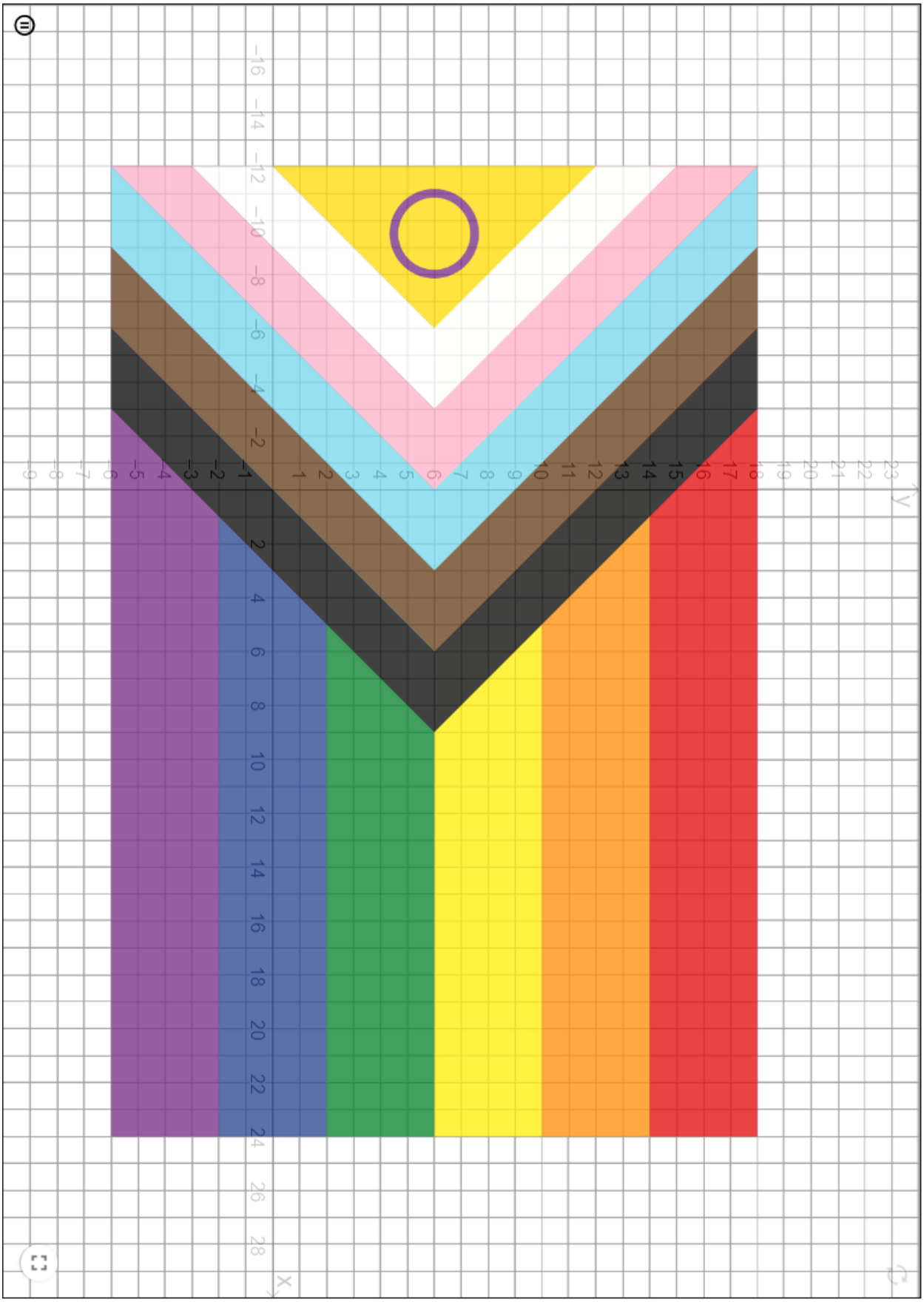
https://www.verywellmind.com/what-the-colors-of-the-new-pride-flag-mean-5189173

www. tentotwelvemath.com/interactive/

Coordinates: construct the Pride Flag

Flag Outline	$(-12, 18)$
	$(-12, -6)$
	$(24, -6)$
	$(24, 18)$
Horizontal Stripes	$(-12, -2)$
	$(-12, 2)$
	$(-12, 6)$
	$(-12, 10)$
	$(-12, 14)$
	$(24, -2)$
	$(24, 2)$
	$(24, 6)$
	$(24, 10)$
	$(24, 14)$

Yellow triangle	$(-12, 0)$
	$(-6, 6)$
	$(-12, 12)$
White hexagon >	$(-12, -3)$
	$(-3, -6)$
	$(-12, 15)$
Pink hexagon >	$(0, 6)$, (-12,-3) (-12,15)
Pale blue hexagon >	$(-9, -6)$
	$(3, 6)$
	$(-9, 18)$
Brown hexagon >	$(-6, -6)$
	$(6, 6)$
	$(-6, 18)$
Black hexagon	$(-3, -6)$
	$(9, 6)$
	$(-3, 18)$



www. tentotwelvemath.com/interactive/

Area calculations (grid squares)

Whole flag	Red trapezoid	Orange trapezoid	Yellow trapezoid
The flag on the grid measures 24 by 36 squares. $24 \times 36 = 864$	$a = 27,\ b = 23,\ h = 4$ $A = \frac{a+b}{2} \times h$ $= \frac{27+23}{2} \times 4$ $= \frac{50}{2} \times 4$ $= 100$	$a = 23,\ b = 19,\ h = 4$ $A = \frac{a+b}{2} \times h$ $= \frac{23+19}{2} \times 4$ $= \frac{42}{2} \times 4$ $= 84$	$a = 19,\ b = 15,\ h = 4$ $A = \frac{a+b}{2} \times h$ $= \frac{19+15}{2} \times 4$ $= \frac{34}{2} \times 4$ $= 68$
Yellow triangle Base = 12 Height = 6 $A = base \times height \div 2$ $= 12 \times 6 \div 2$ $= 36$	White chevron White triangle: $base \times height \div 2$ $= 18 \times 9 \div 2 = 81$ White chevron = =white triangle – yellow triangle $= 81 - 36$ $= 45$	Pink chevron Pink triangle: $base \times height \div 2$ $= 24 \times 12 \div 2 = 144$ Pink chevron = =pink triangle – white triangle $= 144 - 81$ $= 63$	Blue, brown, black ½ of the blue chevron is a parallelogram. Area of blue parallelogram: $base = 3,\ height = 12$ $A = 3 \times 12 = 36$ Area blue shape $= 36 \times 2 = 72$

Total area should equal $24 \times 36 = 864$.

red + orange + yellow + green + blue + purple + black + brown + blue + pink + white + y-triangle

$= 100 + 84 + 68 + 68 + 84 + 100 + 36 + 45 + 63 + 72 + 72 + 72 = 864$ ✓