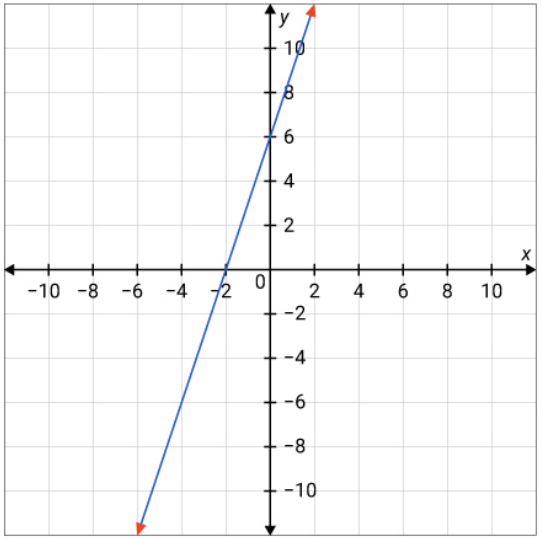
T2 MATH FORMULA CHAPTERS .

9 ADV - 23 & 24 .

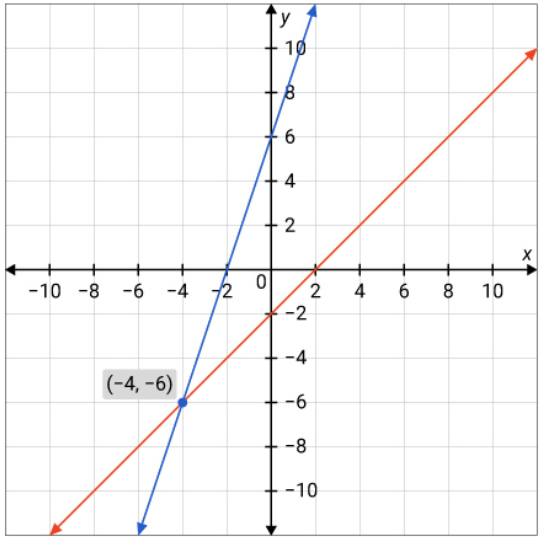
7.1 : GRAPHING SYSTEMS OF EQUATIONS

CONSISTENT AND DEPENDENT



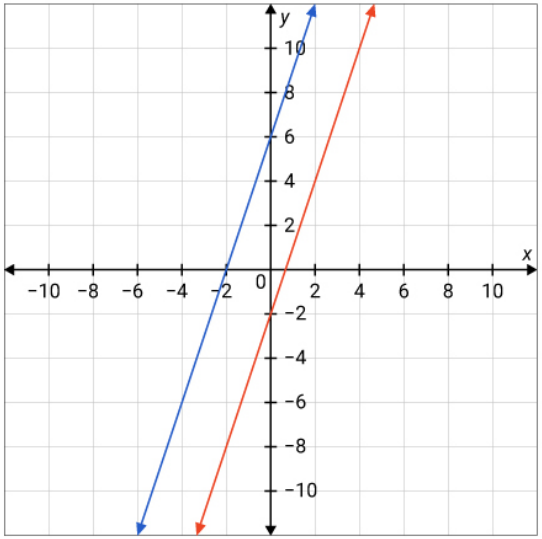
INFINITELY MANY SOLUTIONS

CONSISTENT AND INDEPENDENT



ONE SOLUTION

INCONSISTENT



NO SOLUTION

10.4 : DISTANCE

DISTANCE FORMULA ON THE NUMBER LINE :

$$D = |x_2 - x_1| \quad \text{OR} \quad D = |x_1 - x_2|$$

DISTANCE FORMULA ON THE COORDINATE PLANE :

$$\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

10.5 : LOCATING POINTS ON A NUMBER LINE

COORDINATE EQUATION :

$$x_1 + \frac{a}{b}(x_2 - x_1)$$

SECTION FORMULA ON A NUMBER LINE :

$$\frac{n x_1 + m x_2}{m + n}$$

10.6 : LOCATING POINTS ON A COORDINATE PLANE

FRACTIONAL DISTANCES FORMULA :

$$\left(x_1 + \frac{a}{b}(x_2 - x_1), y_1 + \frac{a}{b}(y_2 - y_1)\right)$$

SECTION FORMULA :

$$\left(\frac{n_{x1} + m_{x2}}{m + n}, \frac{n_{y1} + m_{y2}}{m + n}\right)$$

10.7 : MIDPOINT FORMULA

MIDPOINT FORMULA :

$$M = \frac{x_1 + x_2}{2}$$

MIDPOINT FORMULA :

$$\left(\frac{x_1 + x_2}{2} , \frac{y_1 + y_2}{2} \right)$$

11.2 : ANGLE RELATIONSHIPS

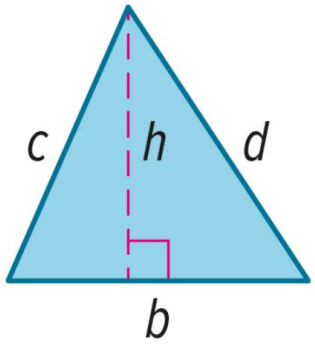
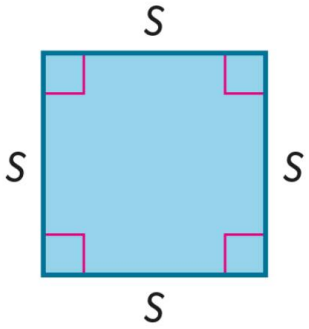
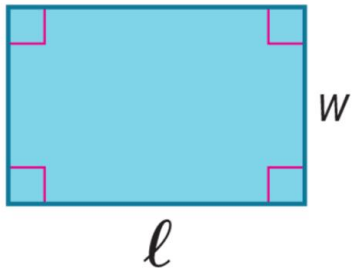
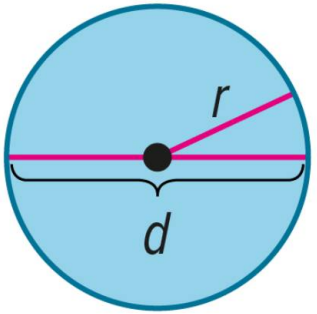
COMPLEMENTARY ANGLES :

$$M = \frac{x_1 + x_2}{2}$$

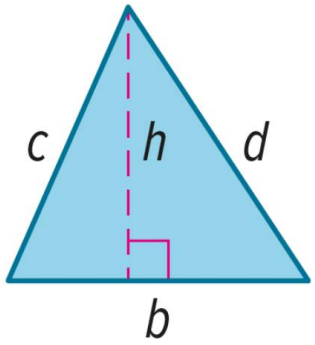
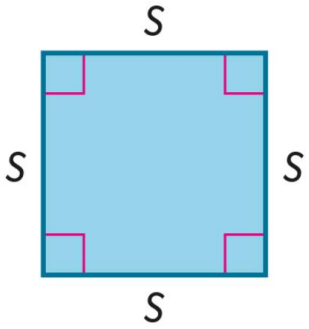
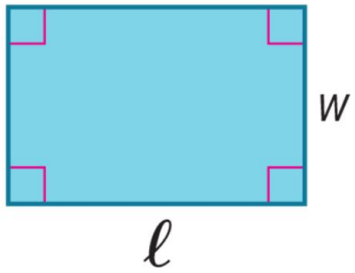
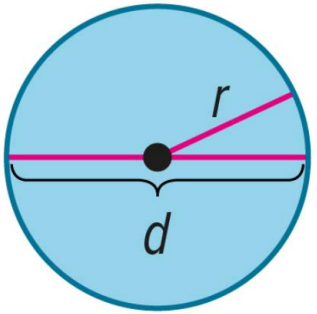
MIDPOINT FORMULA :

$$\left(\frac{x_1 + x_2}{2} , \frac{y_1 + y_2}{2} \right)$$

11.3 : TWO-DIMENSIONAL FIGURES

Triangle	Square	Rectangle	Circle
			
Perimeter $P = b + c + d$ Area $A = \frac{1}{2}bh$	Perimeter $P = s + s + s + s = 4s$ Area $A = s^2$	Perimeter $P = \ell + w + \ell + w = 2\ell + 2w$ Area $A = \ell w$	Circumference $C = 2\pi r$ or $C = \pi d$ Area $A = \pi r^2$

11.3 : TWO-DIMENSIONAL FIGURES

Triangle	Square	Rectangle	Circle
			
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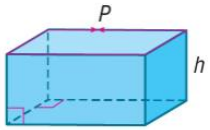
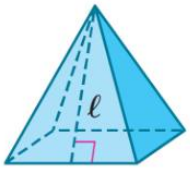
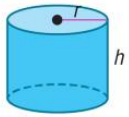
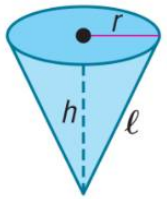
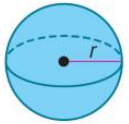
11.5 : THREE-DIMENSIONAL FIGURES

Prism	Right Pyramid	Cylinder	Cone	Sphere
				
$S = Ph + 2B$	$S = \frac{1}{2}Pl + B$	$S = 2\pi rh + 2\pi r^2$	$S = \pi rl + \pi r^2$	$S = 4\pi r^2$
$V = Bh$	$V = \frac{1}{3}Bh$	$V = \pi r^2 h$	$V = \frac{1}{3}\pi r^2 h$	$V = \frac{4}{3}\pi r^3$

S = total surface area V = volume h = height of a solid
P = perimeter of the base B = area of base l = slant height, r = radius

" العِلمُ يرفعُ بيوتًا لا عماد لها
والجهلُ يهدمُ بيوتَ العزِ والكرمِ " .