



# Lesson Plan

Topic: Graphic linear equationsLevel: Form 3Subject: MathematicsTime of lesson: 80 minutes (a double lesson)Learning Objectives:East of lesson: 80 minutes (a double lesson)

## Cognitive:

• Memorize the geometrical meaning of the *x* & *y* axes and slope

## <u>Skill:</u>

• Know how to calculate the slope of straight line

## Affective:

• Enjoy the lesson.

# Teaching Resources (see appendix)

- YouTube Video
- PPT
- Quiz





Purpose of Teaching / Stage	Teaching sequences and activities	Resources
Checking Homework (10 mins) ➤ To check the answer of the assigned homework	<ol> <li>Teacher shows the answer of the homework (refer to Appendix I) about Basic Probability on the visualizer.</li> <li>Students check the answer for their neighbor.</li> </ol>	<ul> <li>Homework (Refer to Appendix I)</li> <li>Isic Probability</li> <li>How many pleces are there total in the probability of handing on eacher a white probability of landing on eacher a white probability of landing on eacher a white piece or a black piece?</li> <li>If you spure the spinner 1 time, what is the probability of handing on eacher a white piece or a black piece?</li> <li>If you spure the spinner 1 time, what is the probability of handing on eacher a white piece or a black piece?</li> <li>If you spure the spinner 1 time, what is the probability of handing on eacher a white piece or a black piece?</li> <li>If you spure the spinner 1 time, what is the probability of handing on eacher a white piece or a black piece?</li> <li>If you spure the spinner 1 time, what is the probability of handing on eacher a white piece or a black piece?</li> <li>If you were to noll the dice cone time, what is the probability of a landing on a even number?</li> <li>If you were to noll the dice cone time, what is the probability of a landing on a even number?</li> <li>If you were to noll the dice cone time, what is the probability of a landing on a even number?</li> <li>If you were to noll the dice cone time, what is the probability of a landing on a even number?</li> <li>If you were to noll the dice cone time, what is the probability of a landing on a even number?</li> <li>If you were to noll the dice cone time, what is the probability of a landing on a even number?</li> <li>It you were to noll the dice cone time, what is the probability of a landing on a even number?</li> <li>If you were to select 1 shape at madom from the atray?</li> <li>If you were to select 1 shape at madom from the atray?</li> <li>If you were to select 1 shape at madom from the atray?</li> <li>If you were to select 1 shape at madom from the atray?</li> <li>If you were to select 1 shape at madom from the atray?</li> <li>If you were to select 1 shape at madom from the atray?</li> <li>If you were to select 1 shape at madom from the atray?</li> <li>If yo</li></ul>
<ul> <li>Watching YouTube</li> <li>Video (30 mins)</li> <li>➢ To teach linear</li> <li>equations by playing the</li> <li>YouTube video</li> </ul>	<ol> <li>Teacher plays a 30 mins YouTube video about linear equations. (https://www.youtube.com/watch?v =Ft2_QtXAnh8)</li> <li>While playing the video, teacher stops the video and ask students some questions to check their understanding. (E.g. What is standard form of linear equations?)</li> </ol>	YouTube video $\gamma = \mathbb{R} \times - \mathbb{P}$ $\gamma = \mathbb{M} \times + \mathbb{B}$ m = 2 $B = -\mathbb{Y}$ $m = \frac{2}{1} = \frac{risc}{rVA}$ $M = \frac{2}{1} = \frac{risc}{rVA}$ $M = \mathbb{R} \times - \mathbb{R}$ $M = \frac{2}{1} = \frac{risc}{rVA}$ $M = \mathbb{R} \times - \mathbb{R}$ $M = \frac{2}{1} = \frac{risc}{rVA}$ $M = \mathbb{R} \times - \mathbb{R}$ $M = \frac{2}{1} = \frac{risc}{rVA}$ $M = \mathbb{R} \times - \mathbb{R}$ $M = \mathbb{R} \times - \mathbb{R} \times - \mathbb{R} \times - \mathbb{R}$ $M = \mathbb{R} \times - $
<ul> <li><u>Teaching with</u></li> <li><u>PowerPoint (20 mins)</u></li> <li>➢ To consolidate the students' knowledge in this topic.</li> </ul>	<ol> <li>Teacher teaches the concepts of linear equation with the PowerPoint (refer to Appendix II)</li> <li>Concepts of linear equation         <ul> <li>a. Definition of slope</li> <li>b. Point-slope Form</li> <li>c. Two-points Form</li> </ul> </li> </ol>	PowerPoint (Refer to Appendix II)

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Mark-bearing Quiz	1. Students have to complete a quiz	Quiz (Refer to Appendix III)
(20mins)	(refer to Appendix III) about linear	Linear Equations Ouiz Class no:
	equation in 20 minutes.	1. What are the x and y-intercepts?         2. Which is the following equation rewritten in alope-intercept form: $-8x = -2y$ (A) $v = iat(x, 0)$ (A) $v = iat(x, 0)$ (B) $v = (a, 0, 0)$ (A) $v = iat(x, 0)$ (B) $v = (a, 0, 0)$ (B) $v = (a, 0)$ (B) $v = (a, 0, 0)$ (B) $v = (a, 0)$
➤ To check students'		(c) $x \sin(2, 0)$ y $\sin(0, 3)$ D) $x \sin(2, 0)$ $y \sin(0, -3)$ $y \sin(0, -3)$ $y \sin(2, 0)$ $y \sin(2, $
understanding		3. Which is free about the given lim? 4. Which is free about the given lim? 4. Which is the question of the given graph? (A) Its above is -3 and given showing (-2, 5), (b) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (c) Its above is -3 and given showing (-2, 5), (
		5. Which equation has a slope of $\frac{1}{4}$ and a pointered of 3?         6. Find for aloge of the given points (3, 4) and (7, -0).           A) $\frac{1}{4} = x^2 + 3$ D) $y = \frac{1}{4}x + 3$ D) $y = \frac{1}{4}x + 3$ C) $\frac{1}{4} x = y + 3$ D) $y = 3x + \frac{1}{4}$ C) $\cdot 2$ D) 0         0
		7. Which of the following best presents the graph of a line with a large of $-\frac{2}{3}$ and a y-intercept of -1? A) $D$

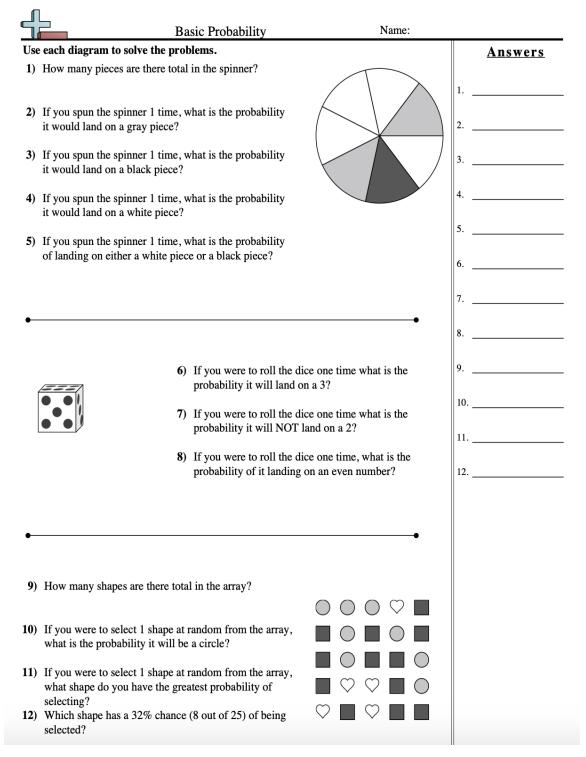
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### **Teaching resources**

### Appendix I



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# **Appendix II**

we can use the following formula to find the slope: $m = -\frac{A}{B}$ $m = -\frac{A}{$	Slope of a Line Slope basically describes the steepness of a line	If a line goes up from left to right, then the slope has to be positive Conversely, if a line goes down from left to right, then the slope has to be negative	Definitions of Slope Slope is simply the change in the vertical distance over the change in the horizontal distance $slope = m = \frac{rise}{run} = \frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1}$	$m = \frac{y_2 - y_1}{x_2 - x_1}$ The formula above is the one which we will use to find the slope of specific line. In order to use that formula we need to know, or be able to find 2 points on the line
$\begin{aligned} \begin{array}{c} \text{If a line is in the form Ax + By = C_{r} \\ \text{for each as use the following formula to find the slope:} \\ \mu = -\frac{A}{B} \end{aligned} \qquad $		2	3	4
$ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x - 3 $ $ y = \frac{1}{2} \sqrt{2} x$	we can use the following formula to find the slope:	$ \begin{array}{l} (-1,4), (5,6) \\ m = \frac{6-4}{5-(-1)} \\ m = \frac{2}{3} \end{array} $	while vertical lines have no slope	in Slope-Intercept Form
If you are given:     Graph     The slogg and a goots     In you can be any strength of the second of the secon		6	7	8
	The algoe ind viewerses	$\label{eq:response} \begin{array}{c} \mbox{Finded} m \\ \mb$	The <u>slope</u> and <u>a point</u> - <u>slope</u> and <u>a point</u> - <u>slope</u> and <u>a point</u> - <u>slope</u> in the lose evaluation given the slope and a point same point - <u>slope</u> term. <b>y</b> - y, - (m(x - x)) - <u>y</u> - (m) - <u>1</u> <u>y</u> (x - 4) - <u>y</u> - (m) - <u>1</u> <u>y</u> (x - 4) - <u>y</u> - (m) - <u>1</u> <u>y</u> (x - 2) - <u>y</u> - (m) - <u>1</u> <u>y</u> (x - 2) - <u>y</u> - (m) - <u>1</u> <u>y</u> (x - 2)	Two points           - "todag the support of the

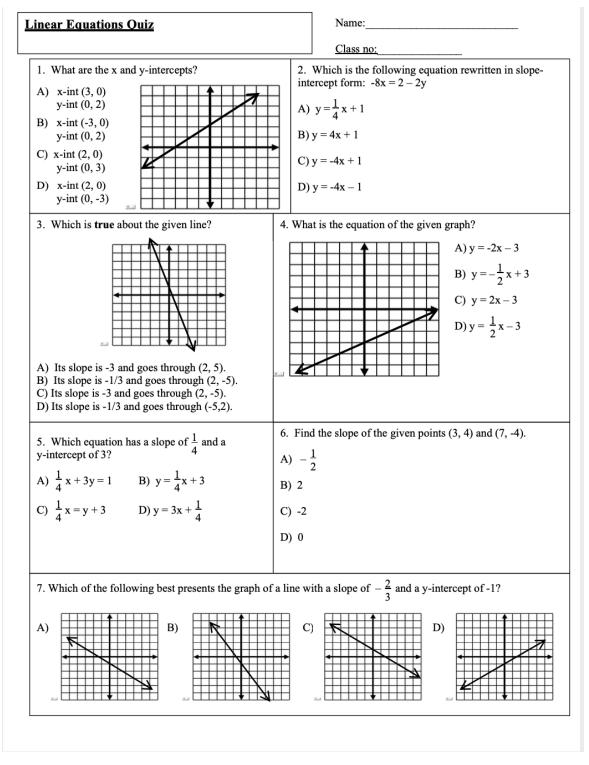
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# Appendix III (Quiz)



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8. What are the x and y-intercepts of $3x - 5y = 15$ ?		9. Graph a line with a slope of 2 and goes through the point (-1, 3).	
<ul> <li>A) x-intercept (0, -3), y-intercept (5, 0)</li> <li>B) x-intercept (-3, 0), y-intercept (0, 5)</li> <li>C) x-intercept (0, 5), y-intercept (-3, 0)</li> <li>D) x-intercept (5, 0), y-intercept (0, -3)</li> </ul>			
10. Given $8x + 4y = 4$ , identify the slope and y-	10. Given $8x + 4y = 4$ , identify the slope and y-intercept.		
A) Slope = -2 and y-int = 1 B) Slope = $-\frac{1}{2}$ and y = 1		A) $-\frac{3}{2}$	
C) Slope = 1 and y-int = -2		B) $-\frac{2}{3}$	
D) Slope = 2 and y-int = $1$	C) $\frac{2}{3}$		
		D) $\frac{3}{2}$	
12. Graph the equation $y = -\frac{2}{5}x$ .	13. Which grap	h represents the x & y-intercepts for $2y = 8 - 8x$ ?	
	A)	B)	
14. What is the slope of the given graph?			
A) -1 B) 1 C) 0 D) 3	C)		

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