

**Session II- No Calculator**

Name: \_\_\_\_\_

27.  $(8^5)(8^6)$  Which of the following are equivalent? $8^{11}$  or  $8^{30}$  or  $64^6$  Circle all that apply.

28. Katie is 10 years older than Tim. Lou's age is three times Katie's age. If Lou is 42 years old, how old is Tim?

29. Solve for x.  $x^2 - 3x = 8$ 

30. Graph.

$$y = 6x - 1$$

31. Solve for x.  $\frac{x-11}{x+13} = \frac{2}{3}$ 32. What is the product of  $(d + 7)$  and  $(3d - 9)$ ?33. If  $(0, 6)$  and  $(3, 0)$  satisfy the equation:  $8x + by = 24$  What is the value of  $b$ ?

34. Julie is baking cakes for her store. At the start of the day she has 50 cakes. She can make 5 cakes every hour. Which equation represents this event?

a.  $y = 50x$

b.  $y = 5x$

c.  $y = 50x + 5$

d.  $y = 5x + 50$

35. Graph  $4x - y = -1$ ?

36. X is older than Y. Their difference in age is 8 years and their sum of ages is 52 years. How old is X?

37. The width of a rectangle is 8 feet more than the length. The area =  $225 \text{ ft}^2$ . What is the length?38. Solve for x.  $x^2 + 2x - 15 = -12$ 39. **Solve for x and y.**

$$-6x + 2y = -10$$

$$-5x + 7y = -35$$

40. Solve for x.  $\frac{n+2}{25} = \frac{n-4}{35}$ 41.  $3x + 2 \geq -4x + 16$

42.  $L = s + 6$        $s = \text{side}$   
 $A = 21.25 \text{ cm}^2$   
What is the side?

43. Graph  $5x + y = -2$

44. Find the linear relationship. Give the slope and an equation to model the data.

<b>x</b>	<b>y</b>
8	38
9	46
10	54
12	70
13	78

45. Find the vertex and x intercepts.

$$h(x) = (x + 5)(x - 7)$$

46. Find the value of c.  $\frac{x^{15}}{x^8} = x^c$

47. Simplify  $\frac{30x^9y^5}{3x^7y^5}$

48. The table below shows a student's distance from the backboard on a basketball court over time.

x (time seconds)	0	1	2	3	4	5	6	7	8
y (distance in feet)	14	18	20	20	12	1	15	20	24

During which of the following times is the student moving the fastest?

- 0 to 2 seconds
  - 2 to 3 seconds
  - 3 to 5 seconds
  - 5 to 6 seconds
50. Simplify  $y(y + 4) + 7$
- $2y + 11$
  - $5y + 7$
  - $y^2 + 4y + 7$
  - $y^2 + 11y + 11$



