

1. What is the product for the following?

$$(3x^2 - 4x + 2)(2x^2 - 6)$$

2. Factor completely,  $10x^3 + 16x^2 - 8x$

3. The two-way table below represents the party type chosen by gender.

		Gender		
		Male	Female	Total
Party Type	Bowling	6	2	8
	Skating	3	11	14
	Dancing	1	3	4
	Total	10	16	26

a) What is the approximate joint relative frequency of the number of Males who chose Skating?

b) What is the approximate joint relative frequency of the number of Females who chose Dancing?

4. The product of 18 and 5 less than a number is 162. Find the number.

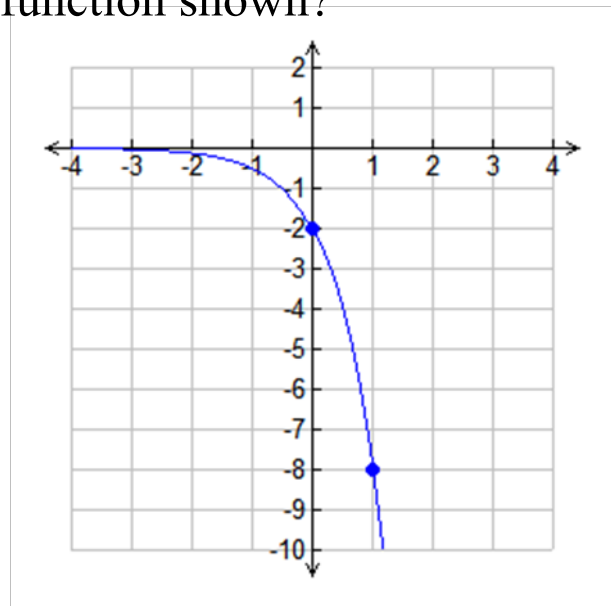
5. Solve the following for  $x$ .

$$-3|2x - 8| = -27$$

6. Identify the vertex of the following function by writing it equation in vertex form.

$$f(x) = x^2 - 6x - 16$$

7. What is the equation of the function shown?



8. Given the following function:

$$f(x) = -6\sqrt{x-3} + 5$$

- What type of function is it?
- What is the domain and range of the function?
- State all transformation of the function.

9. Find the difference of the following in simplest form.

$$\frac{10(x-2)}{x-4} - \frac{2(x+6)}{x-4}$$

10. Given the following function:

$$f(x) = -x^2 - 2x + 24$$

- Find the vertex and axis of symmetry.
- Find all zeroes of the function.
- What is the  $y$ -intercept?
- Graph the function.

