

$${}^5P_5 = \overline{(5-5)!}$$

$$0! = 1$$

$$A_M - A_S$$

$$25\pi - 4\pi = 21\pi$$

$$\frac{21\pi}{36\pi}$$

T T T
H H H

THT
HTH
HHT
TTH
HTT
THH

2

$$\underline{2} \cdot \underline{2} \cdot \underline{2} = 8 \text{ options}$$

May 30-8:19 AM

Semester Review D

Evaluate each piecewise function for $x = \underline{-3}$ and $x = \underline{7}$.

$$h(x) = \begin{cases} 0 & \text{if } x \leq -2 \\ 7 & \text{if } -2 < x \leq 5 \\ 10 & \text{if } x > 5 \end{cases}$$

$$g(x) = \begin{cases} 3x^2 + 4 & \text{if } x \leq -1 \\ 2x - 1 & \text{if } x > -1 \end{cases}$$

$$h(-3) = 0$$

$$h(7) = 10$$

$$g(-3) = 3(-3)^2 + 4$$

$$= 3(9) + 4$$

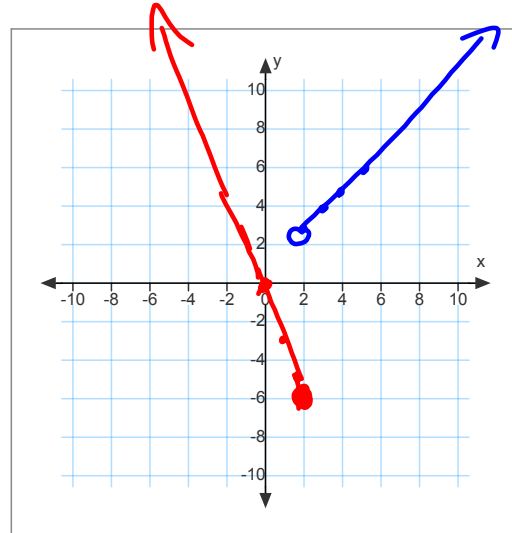
$$36 + 4$$

$$g(7) = 13 \quad 40$$

May 28-3:08 PM

Graph the function.

$$h(x) = \begin{cases} -3x & \text{if } x \leq 2 \\ x+1 & \text{if } x > 2 \end{cases}$$



May 28-3:18 PM

Find the following functions, given:

1. $(f+p)x$
 $(x+2) + (x^2 - x - 6)$
 $x^2 - 4$

2. $(h-f)x$
 $4x^2 - (x+2)$
 $4x^2 - x - 2$

4. $\left(\frac{h}{f}\right)x$
 $\frac{4x^2}{x+2}$

$f(x) = x + 2$

$g(x) = 2x - 5$

$h(x) = 4x^2$

3. $(fg)x$

$(x+2)(2x-5)$
 $2x^2 - 5x + 4x - 10$
 $2x^2 - x - 10$

5. $\left(\frac{f}{p}\right)x$

$\frac{x+2}{x^2 - x - 6} = \frac{1}{(x-3)}$
 $(x-3)(x+2)$

$p(x) = x^2 - x - 6$

May 28-3:19 PM

Find the following functions, given:

6. $g(h(2))$

$h(2) = 4(2)^2$
 $h(2) = 16$

$g(16) = 2(16) - 5$
 $g(16) = 27$
 $g(h(2)) = 27$

7. $h(g(x))$

$h(g(x)) = 4(2x-5)^2$

$f(x) = x + 2$

$g(x) = 2x - 5$

$h(x) = 4x^2$

$p(x) = x^2 - x - 6$

8. $f(g(-3))$

$g(-3) = 2(-3) - 5$
 $= -11$

$f(-11) = -11 + 2$
 $= -9$

$f(g(-3)) = -9$

9. $g(f(x))$

$g(f(x)) = 2(x+2) - 5$

May 28-3:20 PM

Make a box-and-whisker plot of the data.

Find the interquartile range.

$\{ 2, 2, \underline{3}, 10, 10, 15, 15, \underline{20}, 25, 44 \}$

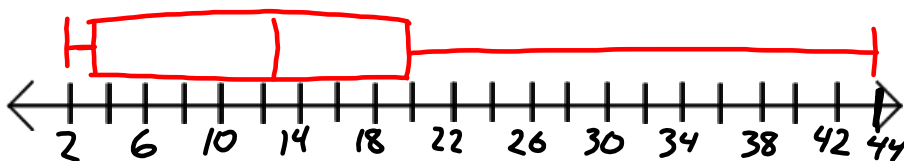
$20 - 3$

IQR = 17

$med = \frac{10 + 15}{2}$

5 number summary:

$\{ 2 - 3 \quad 12.5 \quad 20 - 44 \}$



May 28-3:21 PM

Find the mean, median, and mode of the data.
deer at a feeder each hour: 3, 0, 2, 0, 1, 2, 4

$$\bar{X} = \frac{12}{7}$$

0 0 1 2 2 3 4

$$\text{median} = 2$$

$$\text{mode} = 0 \text{ and } 2$$

May 28-3:23 PM

Find the mean, variance, and standard deviation for this data set.

{ 3, 7, 8, 13, 24 }

X	$(X - \bar{X})$	$(X - \bar{X})^2$
3	3-11 -8	64
7	7-11 -4	16
8	-3	9
13	2	4
24	13	169

$$\bar{X} = 11$$

$$\Sigma = 262$$

$$\sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{n}}$$

$$\sigma = \sqrt{\frac{262}{5}}$$

Divide

2nd ANS

$$\sigma \approx 7.239$$

May 28-3:25 PM