

Grade 12 LS+ GS (Mathematics)

1. From the book page 196-200 # 4 , 7, 9 , 11 , 12, 13 , 14 , 15 , 26, 30
2. Find the area of the region bounded between :
 - a. $f(x) = x^2 - 2x$, the x - axis and the 2 lines of equations $x = -1$ and $x = 3$.
 - b. $f(x) = x^3$, the x axis and the 2 lines of equations $x = -1$ and $x = 0$.
 - c. $f(x) = x^2$ and $g(x) = x + 2$
 - d. $f(x) = -x^2 + 2x + 8$ and the x - axis.
3. Calculate the following integrals :
 - a. $\int_0^1 x(2x^2 - 1)^{10} dx$
 - b. $\int_0^{\pi/2} \frac{\cos x}{1 + \sin x} dx$
 - c. $\int_0^1 \frac{x}{\sqrt{4-x^2}} dx$
 - d. $\int_0^{\pi} x \sin x dx$
 - e. $\int_{-3}^{-1} \frac{1}{x^2} dx$
 - f. $\int_0^1 \frac{x}{(x^2+1)^2} dx$

Grade 12 GS only (Mathematics)

1. From the book page 59 # 13, 16, 18 , 22, 25 .
2. Activity page 62.
3. Match the equation of the parabola with its graph :

$$x-1 = -\frac{1}{4}(y+4)^2$$

$$x+3 = -\frac{1}{16}(y-1)^2$$

$$x-2 = -\frac{1}{12}(y-1)^2$$

$$x+1 = -\frac{1}{4}(y-3)^2$$

$$y+1 = -\frac{1}{16}(x+2)^2$$

$$y+1 = -\frac{1}{12}(x-2)^2$$

