Lembar Kerja Peserta Didik (LKPD)

Memodelkan Fenomena Periodik dengan Fungsi Trigonometri

Nama:.....

Kelas:.....

Penyusun
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LIVEWORKSHEETS

Lembar Kerja Peserta Didik (LKPD)

Tujuan Pembelajaran

1. Melalui grafik trigonometri, peserta didik mampu menjelaskan definisi fungsi periodik dengan tepat.
2. Melalui konsep menggambar grafik, peserta didik mampu menggambarkan grafik trigonometri dengan tepat.
3. Melalui grafik trigonometri dan konsep periode, peserta didik mampu menentukan periode fungsi trigonometri dengan tepat.

Petunjuk Pengerjaan

1. Bacalah doa terlebih dahulu!
2. Bacalah Lembar Kerja Peserta Didik dengan cermat, kemudian mulailah mengerjakan permasalahan yang tersedia!
3. Tanyakan pada guru apabila kalian mendapat kesulitan atau kurang jelas dalam mengerjakan Lembar Kerja Peserta Didik!

Bagaiamana Fungsi Periodik dan Grafik Fungsi Trigonometri?

Untuk menjawab pertanyaan tersebut, simaklah video berikut!

Kunjungi *website* berikut untuk memahami fungsi periodik

https://www.zenius.net/blog/fungsi-periodik

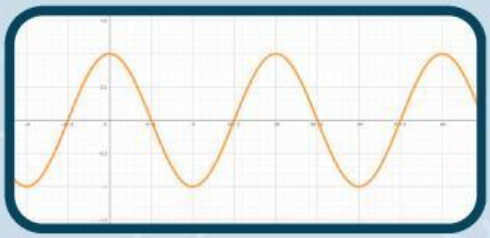
Kunjungi *resource* Geogebra berikut untuk lebih memahami grafik trigonometri

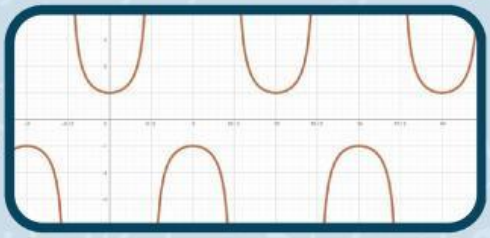
https://www.geogebra.org/m/tfr4r5pw

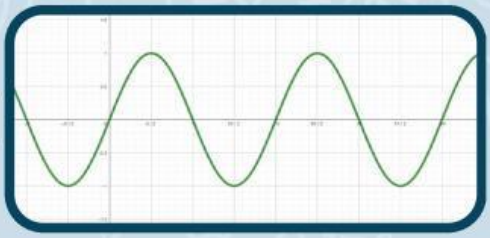
Aktivitas 1

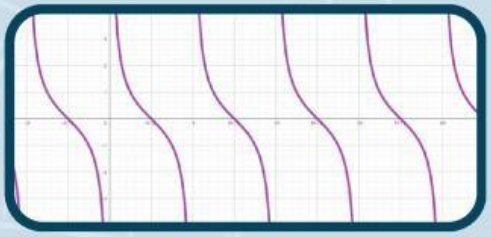
Ayo berlatih!

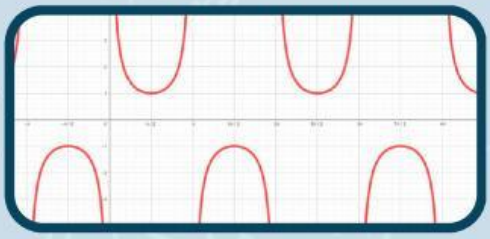
Pasangkan fungsi trigonometri dengan gambar grafik yang sesuai dengan benar!

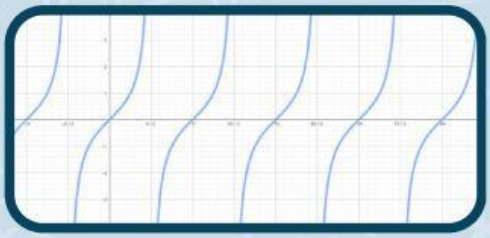
1. 

2. 

3. 

4. 

5. 

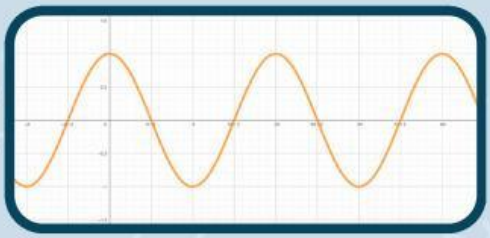
6. 

- y = sin x
- y = cos x
- y = tan x
- y = csc x
- y = sec x
- y = cot x

Aktivitas 2

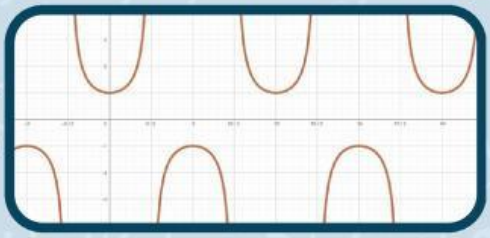
Ayo berlatih!

Jawablah periode yang sesuai dengan grafik fungsi trigonometri!

1. 

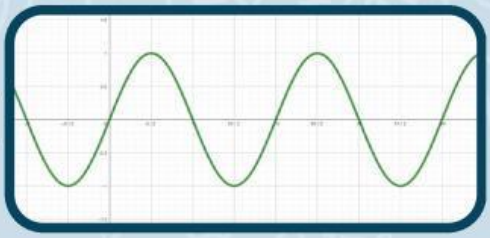
   Periode grafik fungsi trigonometri di samping adalah ...

   - [ ] π
   - [ ] 2π

2. 

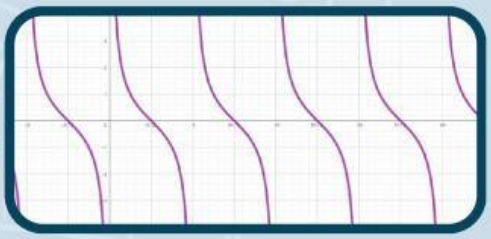
   Periode grafik fungsi trigonometri di samping adalah ...

   - [ ] π
   - [ ] 2π

3. 

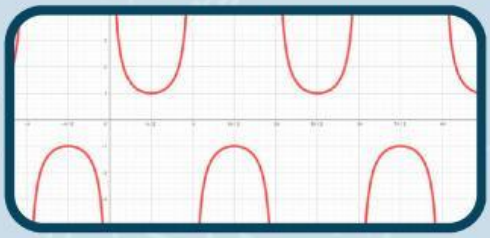
   Periode grafik fungsi trigonometri di samping adalah ...

   - [ ] π
   - [ ] 2π

4. 

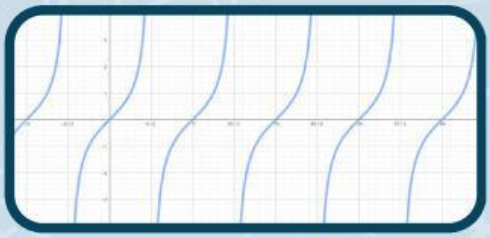
   Periode grafik fungsi trigonometri di samping adalah ...

   - [ ] π
   - [ ] 2π

5. 

   Periode grafik fungsi trigonometri di samping adalah ...

   - [ ] π
   - [ ] 2π

6. 

   Periode grafik fungsi trigonometri di samping adalah ...

   - [ ] π
   - [ ] 2π

Aktivitas 3

Ayo berlatih!

Jawablah bagian rumpang berikut dengan benar!

1. Fungsi periodik sebagai periode yang ... dari suatu grafik.
   Jawab:

2. Periode dari y = sin 2x adalah ....
   Jawab:

3. Periode dari y = 2 cos x adalah ....
   Jawab:

4. Periode dari y = 4 + tan x adalah ....
   Jawab:

5. Periode dari y = csc ½x adalah ....
   Jawab:

6. Periode dari y = sec 2x + 3 adalah ....
   Jawab:

7. Periode dari y = 2 + cot x adalah ....
   Jawab:

8. Grafik yang berulang dapat disebut sebagai fungsi ....
   Jawab:

9. Suatu fungsi periodik adalah fungsi yang memenuhi ... untuk suatu periode p.
   Jawab:

10. Jelaskan secara singkat apa yang Anda pahami tentang fungsi periodik!
    Jawab:

Aktivitas 4

Ayo berlatih!

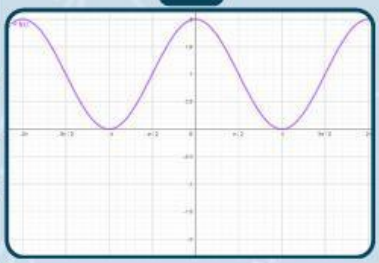
Sebelum menentukan grafik dari fungsi trigonometri perhatikan video berikut!

[redacted]

Tentukan grafik yang sesuai dengan fungsi trigonometri pada soal !

1 **Grafik f(x) = -2 cos x ditunjukkan pada gambar ....**

[redacted]



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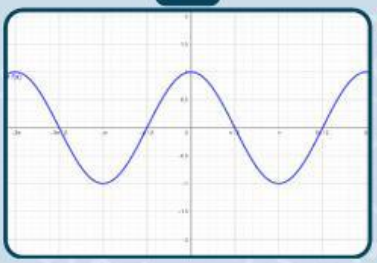

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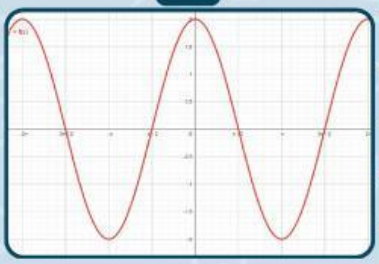

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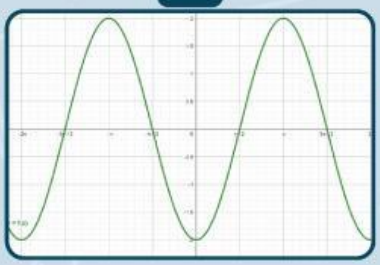

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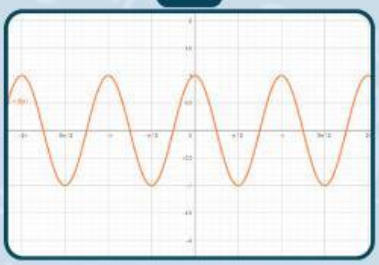
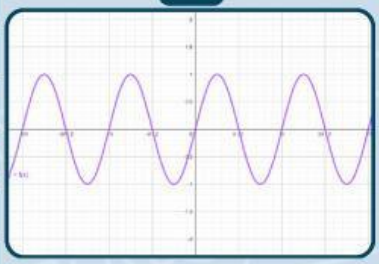
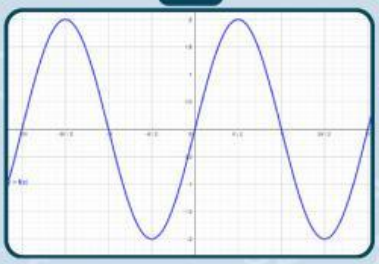


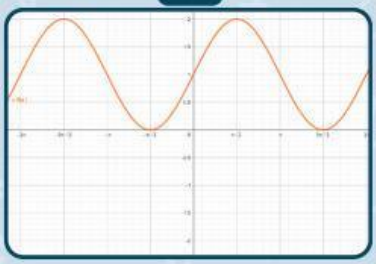
Aktivitas 4

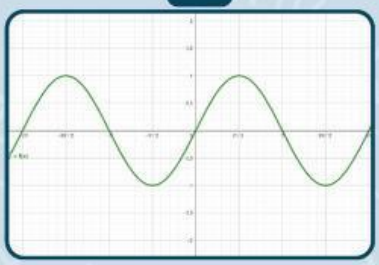
Ayo berlatih!

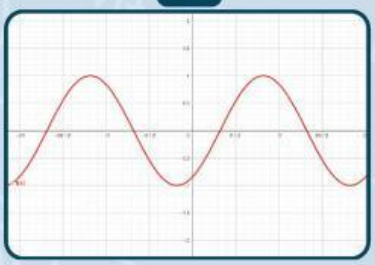
2 Grafik f(x) = sin (x - 1) ditunjukkan pada gambar ....



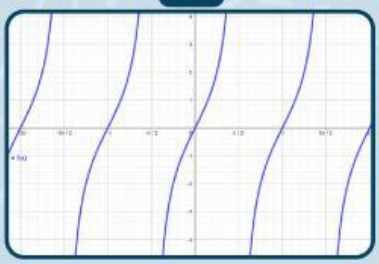


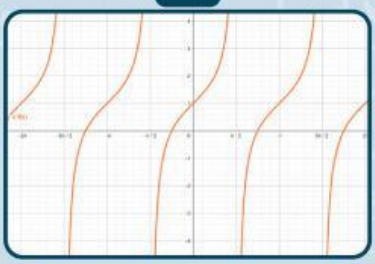


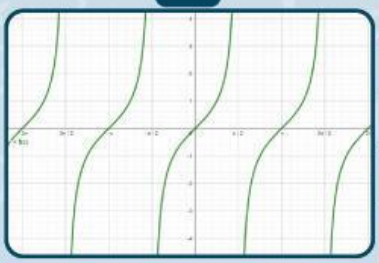


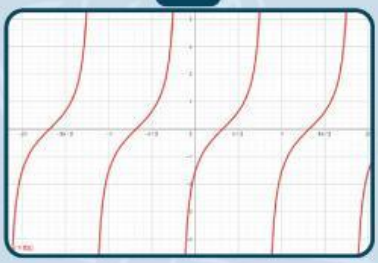


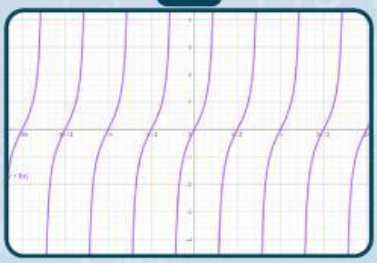
3 Grafik f(x) = 2 tan x ditunjukkan pada gambar ....







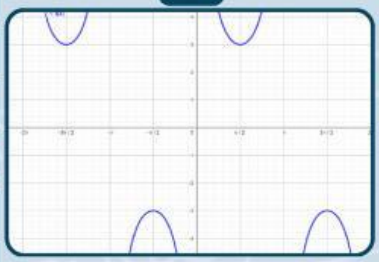


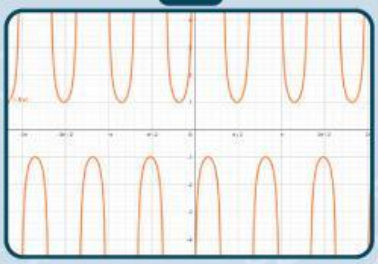


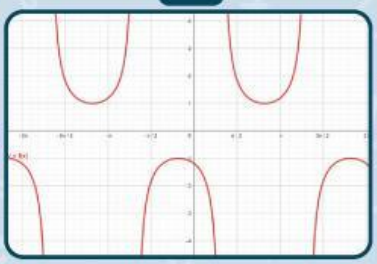
Aktivitas 4

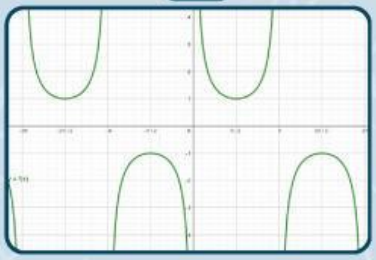
Ayo berlatih!

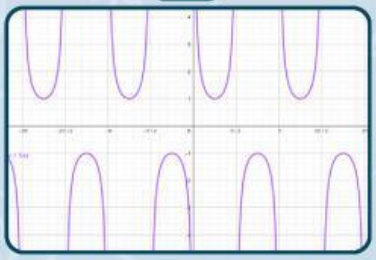
4 Grafik f(x) = csc 3(x - 1) ditunjukkan pada gambar ....



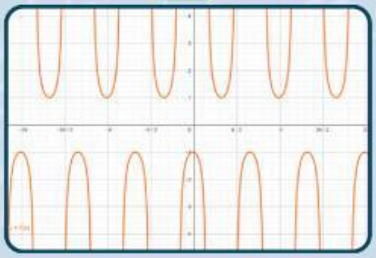


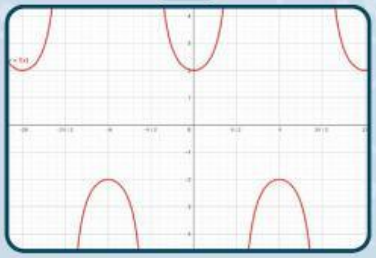


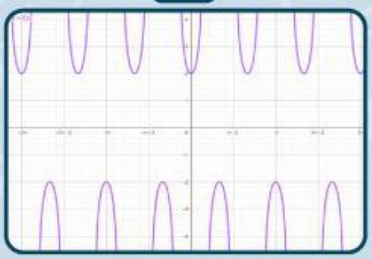


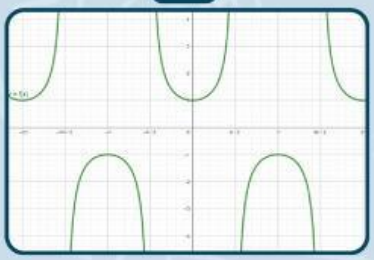


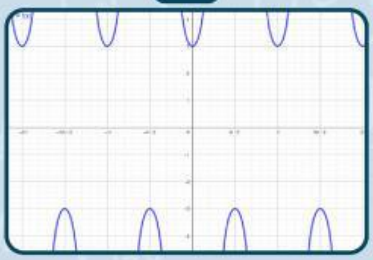
5 Grafik f(x) = 2 sec 3x ditunjukkan pada gambar ....







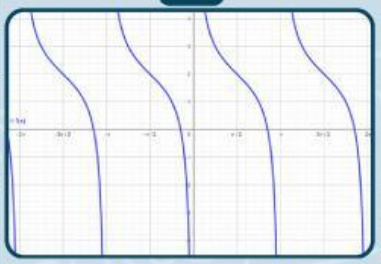


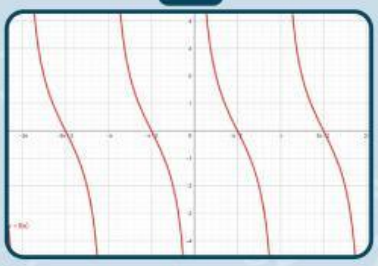


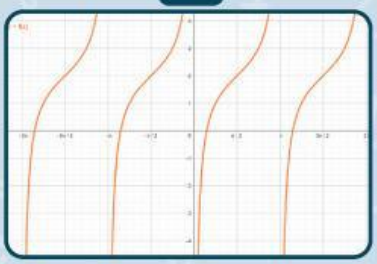
Aktivitas 4

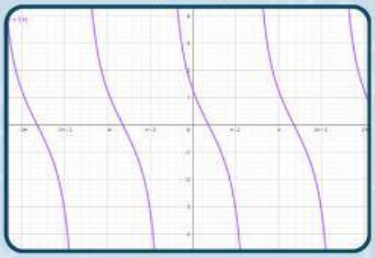
Ayo berlatih!

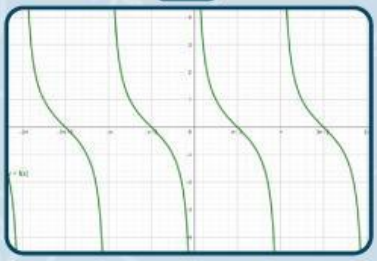
6 Grafik f(x) = 2 - cot x ditunjukkan pada gambar ....











"The more you learn, the more you earn."

– Warren Buffett