P8

PRACTICE 8: ANIMATION OF GRAPHS

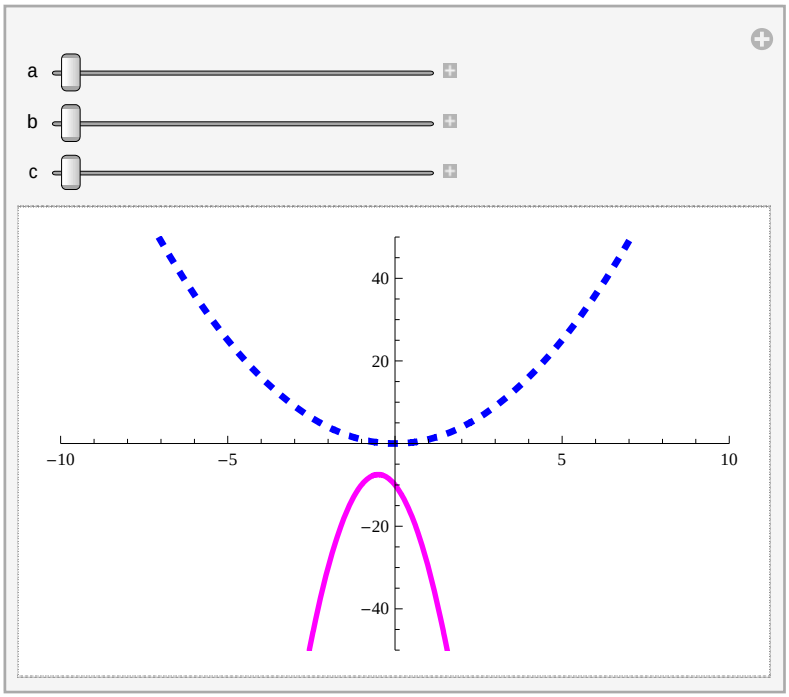
▼ Proposed Exercise P- 8.1

Plot the family of parabolas ax^2+bx+c that depend on the parameters a, b and c

▼ Resolution P- 8.1

★ Plane

```
Clear["Global`*"]
Manipulate[Plot[{x^2, a * x^2 + b * x + c}
  , {x, -10, 10},
  PlotStyle → {{Blue, Thickness[0.010], Dashing[0.015]}, {Magenta, Thickness[0.008]}},
  PlotRange → {{-10, 10}, {-50, 50}}], {a, -10, 10, 3}, {b, -10, 10, 1}, {c, -10, 10, 1}]
```



▼ Proposed Exercise P- 8.2

Plot the family sin(a+x) , sin(a*x) and a*sinx depending on the parameter “a” using the command Manipulate

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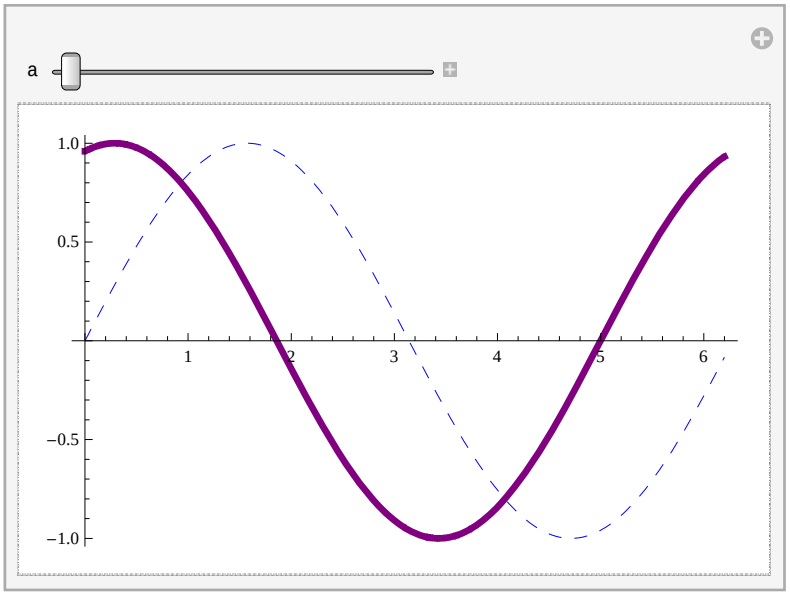
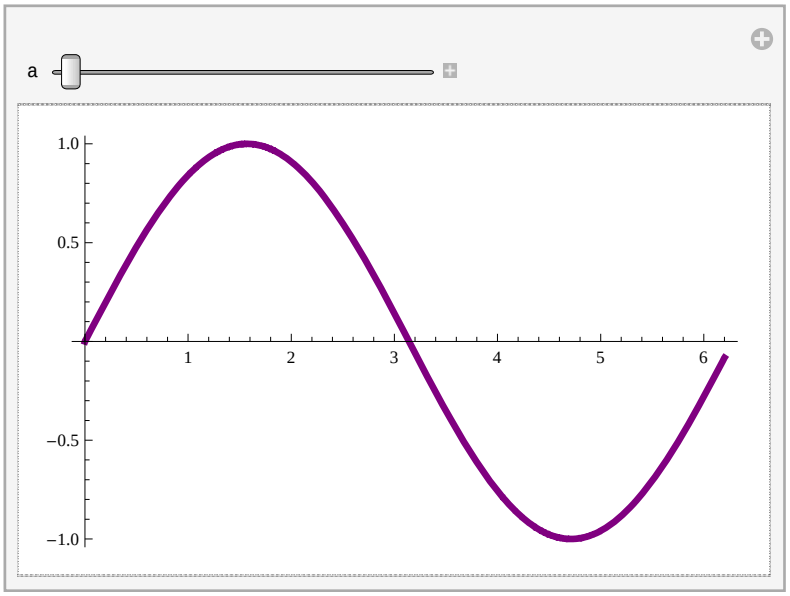
▼ Resolution P- 8.2

★ Usin the command Manipulate

```
Manipulate[Plot[{Sin[x], Sin[a * x]}, {x, 0, 6.2},
  PlotStyle → {{Blue, Dashing[0.02]}, {Purple, Thickness[0.01]}}], {a, -5, 5}]
```




```
Manipulate[Plot[{Sin[x], Sin[a * x]}, {x, 0, 6.2},
  PlotStyle → {{Blue, Dashing[0.02]}, {Purple, Thickness[0.01]}}], {a, 1, 10, 1}]
```



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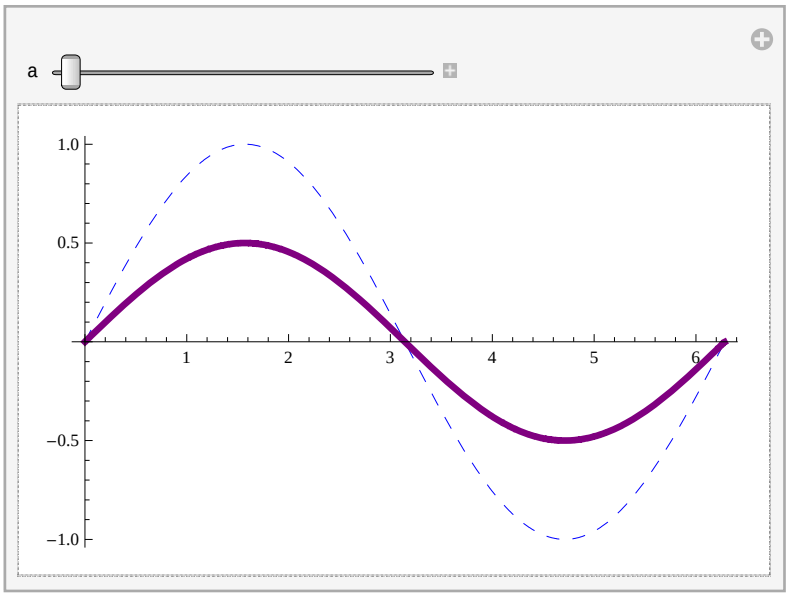
```
Manipulate[Plot[{Sin[x], a Sin[x]}, {x, 0, 6.28},
  PlotStyle → {{Blue, Dashing[0.02]}, {Purple, Thickness[0.01]}}], {a, 0.5, 2}]
```



▼ Proposed Exercise P- 8.3

Plot the family cos(a+x) , cos(a*x) and a*cosx of sinusoidal functions that depend on the parameter "a" using the command Animate.

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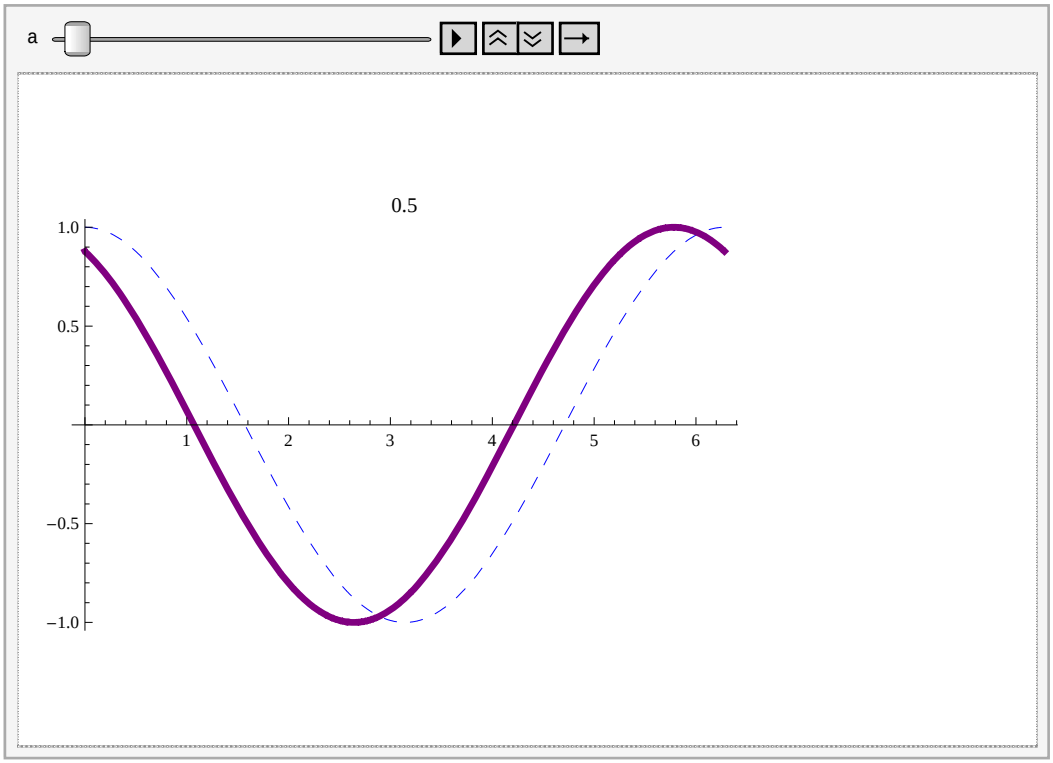
▼ Resolution P- 8.3

★ Using the command Animate

```
Animate[Plot[{Cos[x], Cos[a + x]}, {x, 0, 6.28},
  PlotStyle → {{Blue, Dashing[0.02]}, {Purple, Thickness[0.01]}}, PlotLabel → a],
 {a, 0.5, 2}, AnimationRunning → False]
```



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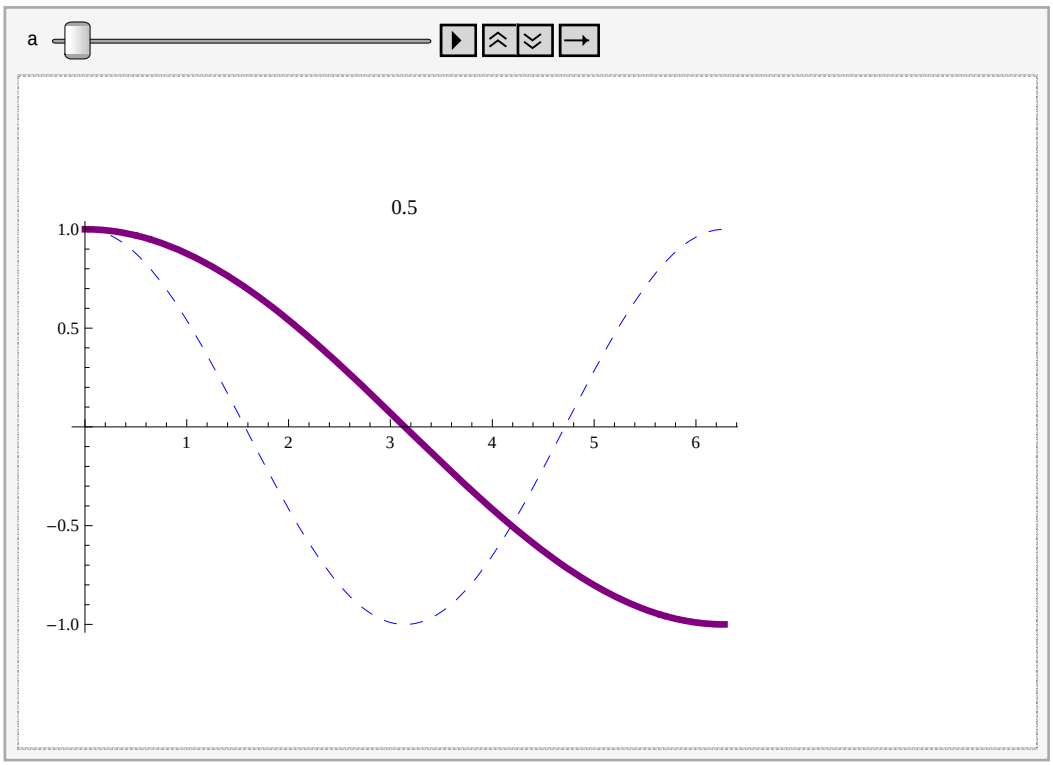
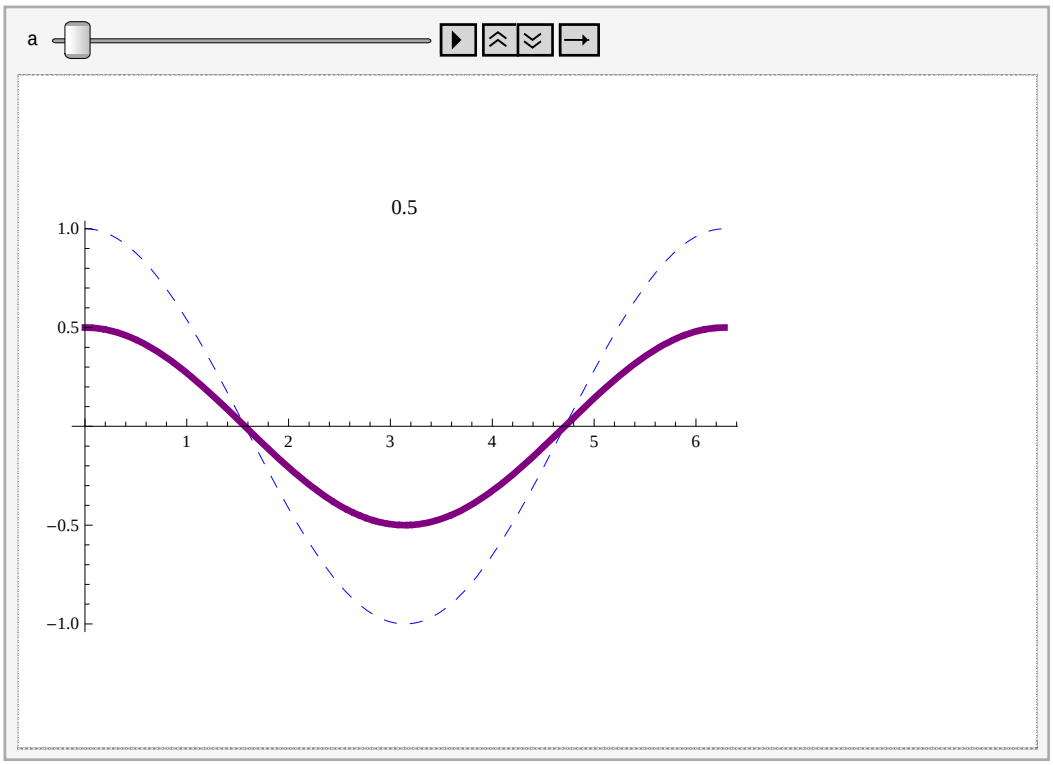
```
Animate[Plot[{Cos[x], Cos[a x]}, {x, 0, 6.28},
  PlotStyle → {{Blue, Dashing[0.02]}, {Purple, Thickness[0.01]}}, PlotLabel → a],
 {a, 0.5, 2}, AnimationRunning → False]
```




```
Animate[Plot[{Cos[x], a * Cos[ x]}, {x, 0, 6.28},
  PlotStyle → {{Blue, Dashing[0.02]}, {Purple, Thickness[0.01]}}, PlotLabel → a],
 {a, 0.5, 2}, AnimationRunning → False]
```



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