

# What do you call a...

Worksheet A - 7.1

Group Members:

1. The velocity of a particle moving along the x-axis in cm/sec is given by  $v(t) = 3t - t^2$  on the interval  $0 \leq t \leq 4$ . (No Calculator)

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a) Find the displacement of the particle at  $t = 4$  sec.

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b) Find the total distance traveled from  $t = 0$  sec. to  $t = 4$  sec.

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c) Find the final position of the particle at  $t = 4$  sec if  $s(0) = 3$ cm.

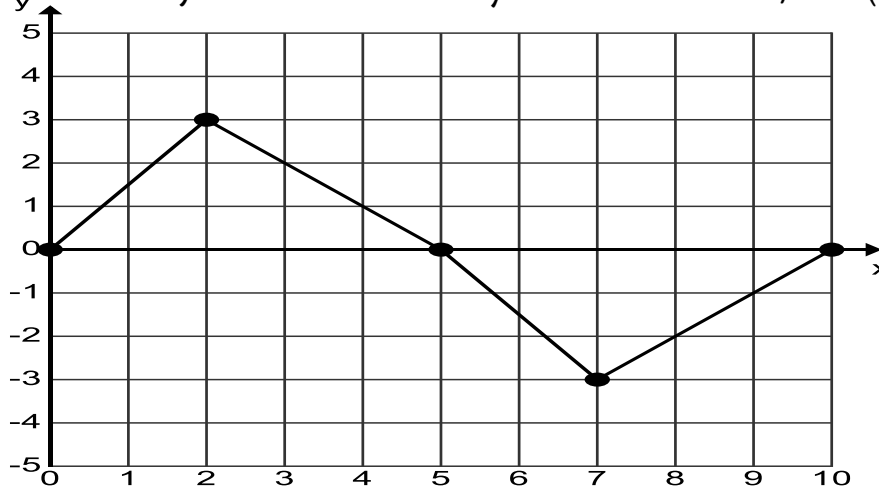
# What do you call a...

Worksheet B - 7.1

Group Members:

1. The rate at which water is pumped out of a pumping station is given by  $r(t) = 5.01 + 1.02t$  in millions of gallons per month from Jan. 1<sup>st</sup>, 2000. How much total water has been pumped out of the station on April 1<sup>st</sup>, 2000? (Calculator OK)

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2. Given the graph of the velocity of a dog moving back and forth on a rope in a yard (that is connected to his leash) where the velocity is measured in ft/sec. (No Calc.)



- a) What is the displacement of the dog in the 10 seconds?
- b) What is the total distance traveled by the dog in the 10 seconds?
- c) What is the dog's acceleration at  $t = 3$  seconds? (Give correct units.)

# What do you call a...

Worksheet C - 7.2

Group Members:

1. Find the area between the graphs of  $y = x$  and  $y = x^3$ . (No Calculator)

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2. Find the area between the graphs of  $x - 2y = 3$  and  $x - y^2 = 0$ . (No Calculator)

# What do you call a...

Worksheet D - 7.2

Group Members:

1. Find the area bounded by the y-axis, the parabola  $y = x^2$ , and the graph of  $y = \cos x$ .  
(Calculator OK)

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2. Find the area bounded by  $y = x + 3$  and  $y = e^x - 1$ .