

MATH 122 WORKSHEET 1

Show all work for full credit.

1. Find an equation for the linear function that passes through the points $(6, 23)$ and $(10, 34)$. Give your answer in *slope-intercept* form.

2. A T-shirt company charges an initial fee plus a fee for each shirt ordered. The company's ordering guide follows.

Shirts, s	30	40	50	60	70
Total, T	\$172.50	\$215.00	\$257.50	\$300.00	\$342.50

a. Use the ordering guide above to write an equation expressing the total, T , as a function of s , the number of shirts ordered.

b. Find the vertical intercept of your function and interpret it in relation to the problem.

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3. The value of a car purchased in 1995 depreciates linearly by \$1400 each year. By 2000, the car is worth \$8500.

a. Find an equation expressing the value, V , as a function of time, t , in years since 1995.

b. Find the horizontal intercept of your function and interpret it in relation to the problem.

4. Decide whether the following functions are linear. Explain how you know *without* finding the equation of the line.

a.

x	4	6	9	13	18
$g(x)$	8	16	24	32	40

b.

x	5	7	10	14	19
$h(x)$	20	26	35	47	62

c.

x	3	5	7	9	11
$f(x)$	4.2	5.4	6.6	7.8	9.0