1. *Chapter 2, Section 2.1, Question 006

Find a number d such that the line containing the points $(d, 5)$ and $(-3, 16)$ has slope -4.

Give an exact answer.

$d =$

-1/4

2. *Chapter 2, Section 2.1, Question 010

Suppose your cell phone company offers two calling plans. The pay-per-call plan charges $\$11$ per month plus 4 cents for each minute. The unlimited-calling plan charges a flat rate of $\$26$ per month for unlimited calls.

(a) What is your monthly cost in dollars for making 300 minutes per month of calls on the pay-per-call plan?

$ **23** *1

(b) Find an equation that gives the cost c in dollars for making m minutes of phone calls per month on the pay-per-call plan.

$c(m) =$

(c) How many minutes per month must you use for the unlimited-calling plan to become cheaper?

If more than **375** *2 minutes per month are used, then the unlimited-calling plan is cheaper.

*1 - *significant digits not applicable; exact number, no tolerance*

*2 - *significant digits not applicable; exact number, no tolerance*

3. *Chapter 2, Section 2.1, Question 015

Find a number t such that the point $(1, t)$ lies on the line containing the points $(19, 5)$ and $(38, 9)$.

Give an exact answer.

$t =$

23/19

4. *Chapter 2, Section 2.1, Question 027

Find a number t such that the point $(t, 2t)$ lies on the line containing the points $(5, -1)$ and $(7, -9)$.

Enter the exact answer.

$t =$

19/6

5. *Chapter 2, Section 2.1, Question 034

Find a number t such that the line containing the points $(-7, t)$ and $(8, -16)$ is parallel to the line containing the points $(5, 6)$ and $(-2, 4)$.

Give an exact answer.

$t =$

-142/7

6. *Chapter 2, Section 2.1, Question 040

Find the equation of the line in the xy -plane that contains the point $(-10, 1)$ and that is perpendicular to the line whose equation is .

Enter the exact answer in the form .

7. *Chapter 2, Section 2.1, Question 042

Find a number such that the line in the -plane containing the points and is perpendicular to the line .

Give an exact answer.

12/7