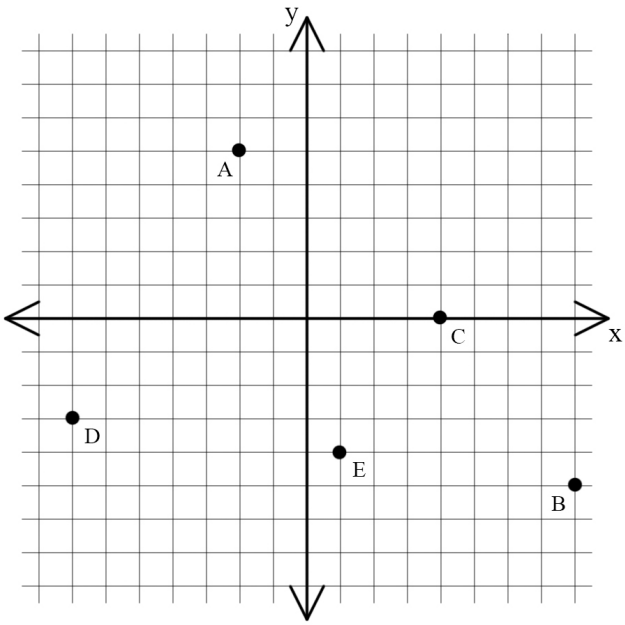
Pre-Algebra Homework #11 – Answer Key

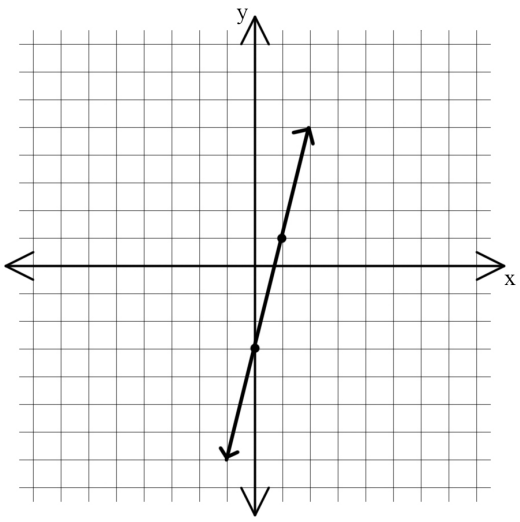
1) $\frac{3}{48}$

2)



3) $\frac{11}{20}$

4)



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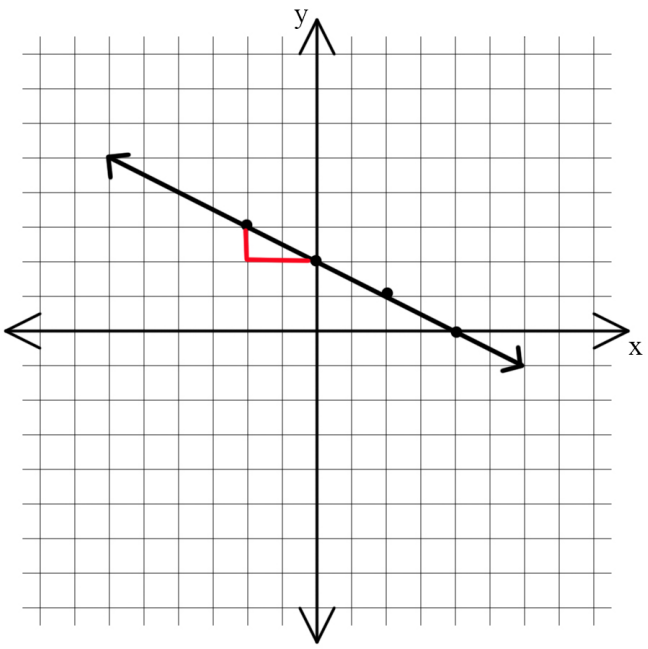
5)



6) Constant of proportionality = $\frac{3}{2}$ The point (6,9) means that 6 movie tickets will cost $9.

7) $91.65

8) Yes, the ratios are the same: girls – 12 to 30 or 2 to 5; boys- 16 to 40 or 2 to 5. The value of each ratio is $\frac{2}{5}$.

9) Yes, the time is always multiplied by the same number, 11, to find the calories burned. 71.5 calories.

10) Yes, Alex will have earned enough money to buy the $220 gaming system by the end of the summer since he will have earned 8 · 28, or 224 dollars for the 8 weeks he worked. A sample table is shown below.

Week	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
Total Earnings	*$0*	*$28*	*$56*	*$84*	*$112*	*$140*	*$168*	*$196*	*$224*

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Pre-Algebra Homework #11 – Answer Key

11) Yes. In 10 more minutes, the tub will reach 18 inches. At that time the ratio of time to height may be expressed as 12 to 18, which is equivalent to 3 to 2. The height of the bathtub increases 1 1⁄2 inches every minute

Time (minutes)	*1*	*2*	*12*
Bathtub Water Height (inches)	*1 1/2*	*3*	*18*

12) If both boys spend 5 hours on homework and reading, Jonathan will be able to play 3 hours of video games and Lucas will be able to play 2.5 hours of video games. Jonathan gets more time playing video games. Jonathan gets 0. 6 hours (36 minutes) for every 1 hour of homework and reading time, whereas Lucas gets only 30 minutes for every hour of homework or reading time.

13) 6 and $66

14) Constant of proportionality = 15

Number of Lawns Mowed	*1*	*2*	*3*	*4*
Earnings ($)	*15*	*30*	*45*	*60*

15) Constant of proportionality = 9

Square Miles	*Number of Deer*
16	*144*
13	*117*
24	*216*

16) Constant of proportionality = .59 and $15.34

17) 28.75%

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18) Constant of proportionality = $\frac{1}{3}$ The point (9,3) means that a 9 movie rental will cost $3.

19) Caitlin's account balance is not proportional to the number of weeks of deposits since the ratio does not remain the same, and when every time is multiplied by the constant, it does not give the corresponding balance values.

Time (in weeks)	0	1	2	3
Account Balance ($)	120	125	130	135

20) $21,437.50

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