Alg 1 Week 18 Block Warm Up

1. Skill 20: Construct a box and whisker plot for a set of data, and find the mean and the range.

1, 2, 5, 9, 6, 7, 12, 10

Skill 4

2. Solve and graph on a number line.

a) $|2x-3| \geq 11$

b) $|2x-3| < 11$

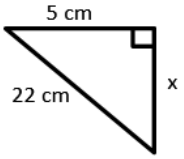
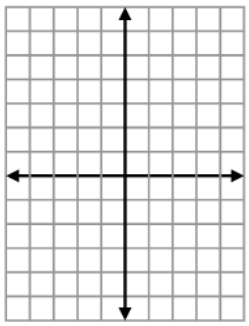
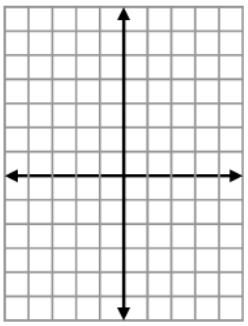
Skill 8

3. Write the equation of the line in slope intercept form that is perpendicular to $y = \frac{2}{3}x + 5$ and passes through (8,-9)

Final EXAM: Geo Readiness Test

CW/HW: Final Review Wk 18 Block

Alg 1 Wk 18 Final Review Name_____ CW/HW

Solve for x, round to the nearest tenth  	2. Solve $10-3(2n-1)>-5(4n+3)$	3. Solve the proportion $\frac{5}{x+4}=\frac{7}{x-2}$
4. Write the equation of the line that passes through (3,-4) and (-2,6) Slope=_____ Y-int=_____ Eqn:_____	5. Graph: $y=2-x^2$ 	6. Graph: $y=-\frac{2}{3}x+4$ 
7. Evaluate the formula: $F=\frac{2}{3}r^3h^2$ Find F , if $r=-3,\ h=2$	8. Solve the system: $3x-2y=10$ $2x+3y=-2$	9. Solve for x in the quadratic, round to the nearest hundredth. $2x^2+4x-7=0$

Pictures not drawn to scale!!!!

Additional Material if needed

Practice Problem

The telephone company offers two types of service. With Plan A, you can make an unlimited number of local calls per month for $18.50. With Plan B, you pay $6.50 monthly, plus 10 cents for each min. of calls after the first 40 min. At least how many min would you have to use the telephone each month to make Plan A the better option?

Practice Problem:

The cost of admission to a popular music concert was $162 for 12 children and 3 adults. The admission was $122 for 8 children and 3 adults in another music concert. How much was the admission for each child and adult?

answer:

Since we are comparing two different plans, we must write an equation for each plan. When you write two different equations for the same problem, it is called a system of equations.

We will let y = the total bill and x = the number of minutes used.

Plan A: The fee is a flat rate. Nothing changes and the fee is not based on the number of minutes. Therefore, y = 18.50

Plan B: The cost is 10 cents per minute, after the first 40 minutes, plus 6.50.

y = .10(x-40) + 6.50.

We have 10 cents times the number of minutes minus 40. We have to subtract the first forty minutes because they are free). Then you must add on the monthly fee of 6.50.

Now let's simplify this equation a little further.
We need to use the distributive property.

y = .10x - 4 + 6.50

Now we can combine like terms (-4 + 6.50= 2.50)

y = .10x + 2.50

So our two equations are:
y = 18.50
y = .10x + 2.50

We know initially that Plan B is cheaper. If we solve the system and find the point where the two companies are the same price, then any minutes thereafter, Plan A will be cheaper.

So, let's solve the system. The best method to use is substitution.

Since y = 18.50, we can substitute this number for y into Plan B's equation.

y = .10x + 2.50
18.50 = .10x + 2.50

Step 1: Subtract 2.50 from both sides.

18.50 - 2.50 = .10x + 2.50 - 2.50
16 = .10x

Now, divide both sides by .10

16/.10 = .10x/.10

160 = x

Therefore, for 160 minutes, the two plans cost the same, $18.50. For any minutes over 160, Plan A would be the greater value.

Try it: Let's try 161 minutes.

Plan A = 18.50
Plan B = .10x +2.50
y = .10(161) + 2.50
y = 18.60

Therefore, Plan A is cheaper.

Practice Problem:

The cost of admission to a popular music concert was $162 for 12 children and 3 adults. The admission was $122 for 8 children and 3 adults in another music concert. How much was the admission for each child and adult?

answer:

1. Understand the problem:
   The admission cost for 12 children and 3 adults was $162.
   The admission cost for 8 children and 3 adults was $122.

   2. Translate the problem to an equation.
   Let x represent the admission cost for each child.
   Let y represent the admission cost for each adult.
   The admission cost for 12 children plus 3 adults is equal to $162.
   That is, $12x + 3y = 162$.
   The admission cost for 8 children plus 3 adults is equal to $122.
   That is, $8x + 3y = 122$.

   3. Carry out the plan and solve the problem.
   Subtract the second equation from the first.

   Substitute 10 for x in $8x + 3y = 122$.

   Therefore, the cost of admission for each child is $10 and each adult is $14.

Alg 1 Week 18 Block Warm Up

1. Skill 19: Construct a box and whisker plot for a set of data, and find the mean and the range.

20, 20, 20, 22, 22, 23, 21, 24, 25, 24, 28

NO WARM-UP