MFM 2P1 Name: _____

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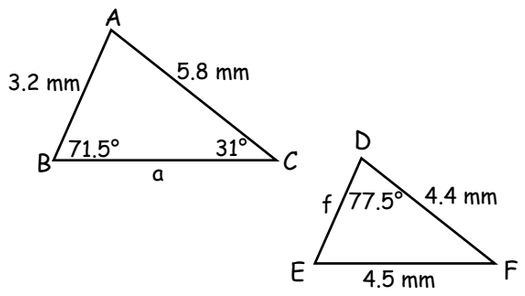
Sure Bets #2 – Trigonometry and Linear Relations

1. Given $\triangle ABC \sim \triangle DEF$:
   a) Find the measures of $\angle A$, $\angle E$ and $\angle F$.
   b) Determine the lengths of side *a* and *f*.



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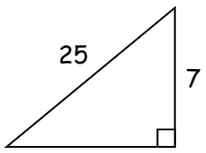
2. Use $a^2 + b^2 = c^2$ to find the missing side in the triangle below.



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3. How long is a ladder that reaches 12 feet up a wall when the base of the ladder is 5 feet away from the building? Draw a diagram to help answer the question.

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2 4. Evaluate: $\sin 76$ = _____.

5. Given $\cos C = 0.1543$ then $\angle C$ = _____

6. Find the unknown value to one decimal place.

a) $\frac{12}{x} = \cos 52$ b) $\frac{x}{54} = \tan 26$ c) $\sin x = \frac{4}{13}$

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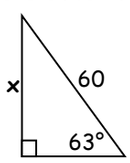
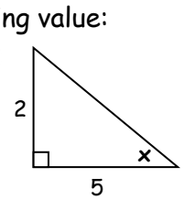
7. Use SOHCAHTOA to determine the missing value:

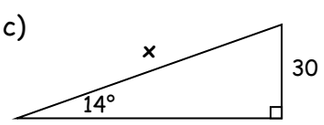
a)



b)



c)



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8. The highest dam in Canada is the Mica Dam, one of the three dams on the Columbia River in British Columbia. From a point 600 m from the foot of the dam, the angle of elevation of the top of the dam is 22°. Draw an appropriate diagram, then find the height of the dam.

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9. For the equation, $y = 3x + 2$. Make a table of values, then draw the graph.

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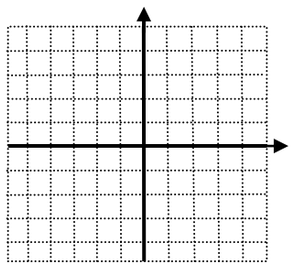
x	y
-2	
-1	
0	
1	
2	



10. Determine the x and y-intercepts by making a table, then graph the relation $2x - 4y = 8$.

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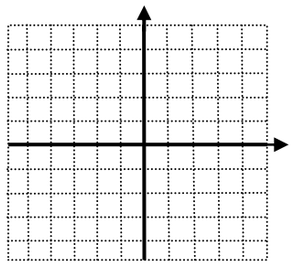

11. Sketch and label each line.

a) $y = \frac{3}{4}x - 2$ b) $y = -3x + 4$

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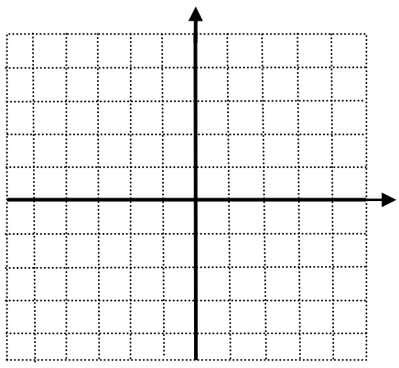
c) $y = \frac{1}{5}x$ d) $y = -\frac{2}{3}x - 5$



12. Determine the slope for each of the following:

a)

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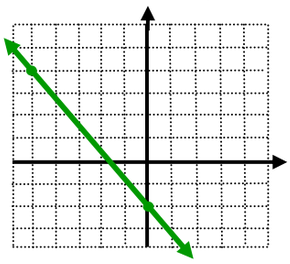

b) (5,7) and (3,-3)

c)

x	y
-5	-30
-2	-6
1	18
4	42

13. Find the equation of the line:

a) shown in the graph.

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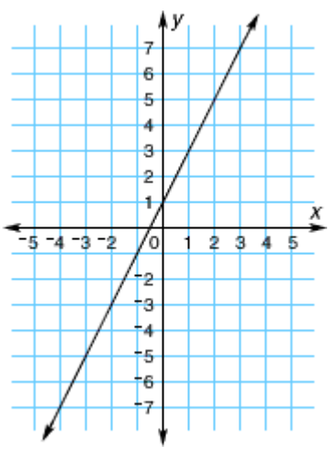

b) With a slope of -2 and passing through (3,8)