

Wages and Salaries

- 1) Ross worked ten hours. If he gets \$9.75 per hour, what will his gross pay be?
- 2) Rachel is paid time-and-a-half for any overtime that she works. If she earns \$10.25 per hour and works eight regular hours, and 3 overtime hours, what is her gross pay?
- 3) Joey earns \$13.40 an hour. If he works on Saturday he gets paid time-and-a-half, and if he works on Sunday he gets double time. Joey worked 20 hours during the week, 6 hours on Saturday, and 5 hours on Sunday. What is his gross pay?
- 4) Chandler makes \$18.50 an hour. He gets time-and-a-half on Saturdays, and double time on statutory holidays. Last week he worked 26 hours from Monday to Friday. He worked 4 hours on Saturday, and 6 hours on Christmas day (Sunday). What is his gross pay?

- 5) Phoebe worked the following schedule. She gets paid time-and-a-half for all hours

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Wage
8	7	8	10	10	4	4	\$12.30

worked over her regular 8-hour day. Find her gross pay:

- 6) Monica is a chef at a 5-star restaurant. She gets paid based on a 40 hour work week at \$17.28 per hour. All time worked over 40 hours she gets time-and-a-half. If she worked 51 hours last week, what is her gross pay?
- 7) You are earning \$14.55 an hour. After 3 hours you get a raise of 15%. What is your new salary?
- 8) Your sister received a raise last week. She was making \$1244.00 per week, and is now making \$1500.00 per week. Find the percent rate of increase.
- 9) Natalie earns \$983.00 per pay period. She is claim code 6. Look up her CPP, EI and IT deductions and calculate her net pay.
- 10) David earns a salary of \$1200 per pay period. His claim code is 3. He pays \$3.75 for a dental plan and \$6.95 in union dues. Calculate David's net pay.
- 11) Sara works for an industrial sewing company. She is paid \$0.48 for each cuff she sews that passes inspection. If she sews 320 cuffs a day that pass inspection, and she works six days a week, calculate her gross income for the week.

- 12) Kenny is paid on a piecework basis and is paid \$0.75 per unit. During a one-week period he produces the following units: Monday, 86; Tuesday, 83; Wednesday, 90; Thursday, 98; Friday, 72; and Saturday, 64.
- How many units did Kenny make?
 - Determine Kenny's gross pay for the week.
- 13) Christy is a real estate agent. When she sells a house, the client (seller) pays her real estate company 7% of the selling price of the house. Determine the commission earned on the sale of a \$275,000 house.

Unit Price and Currency

- 14) Safeway is having a sale: 12 boxes of Kraft Dinner for \$6.99. What is the unit price of the Kraft Dinner?
- 15) Pepsi is on sale at different stores around town. Store 1 sells Pepsi for \$0.85/can. Store 2 sells Pepsi at 6 for \$4.99. Store 3 sells Pepsi at 4 for \$3.50. How much is a Pepsi at each store? Which store has the best buy?
- 16) You are buying the following items:
- Bed - \$699.00
 - Dresser - \$299.00
 - Stereo - \$499.00
 - Blinds - \$50.00
 - 40" TV - \$999.00
- You have \$2800.00 to spend. Will you have enough to pay for the above items after tax?
- 17) A Ferrarri Enzo F-70 sticker price is \$998, 245. It is on sale for 30% off the sticker price. What will the sale price be? What will it cost after taxes?
- 18) You are planning a trip to Grand Forks for the weekend. How much American money can you buy with \$450 Canadian?
- 19) This summer you and a friend have decided to go backpacking across Europe. How many euros can you get for \$625 Canadian?
- 20) Assume you have 100 euros left when you return from your backpacking trip (#19), how many Canadian \$'s would you receive if you sold the euros back to the bank?
- 21) Calculate the amount of money you would receive in Canadian \$'s if you sold 4220 Mexican pesos.
- 22) How much will 500 British Pounds cost in Canadian dollars?

Similar Figures

23) Complete the following chart:

Length in Drawing (cm)	Actual Length (cm)	Scale Factor
5.5	55	
10.2	11220	
0.9		1:10
11		1:250
	190	1:38
	2250	1:30

24) Complete the following chart:

Ratio	Fraction	In Words
3:7		
		3 out of 11
	$\frac{33}{59}$	

25) Solve each of the following proportions:

a) $\frac{m}{10} = \frac{10}{3}$

b) $\frac{6}{14} = \frac{5}{n}$

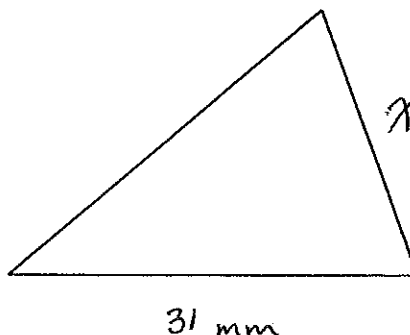
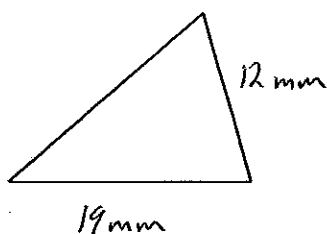
c) $\frac{10}{k} = \frac{8}{4}$

d) $\frac{3}{13} = \frac{v}{3}$

26) A \$4 sales tax is charged for a \$50 purchase. At this rate, what is the sales tax for a \$1200 purchase? Use a proportion to show your work.

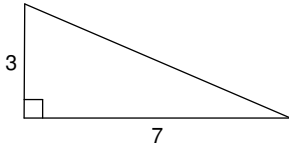
27) A store makes a profit of \$15,000 for every 300 coats that they sell. If they make a profit of \$25,000, how many coats did they sell? Use a proportion to show your work.

28) Solve using equivalent ratios.

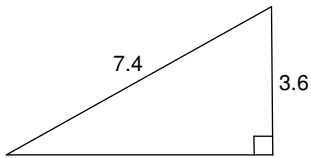


Trigonometry

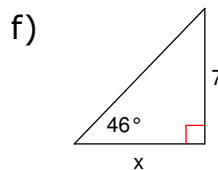
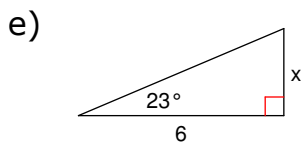
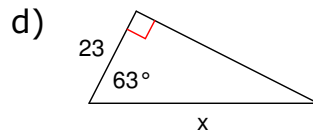
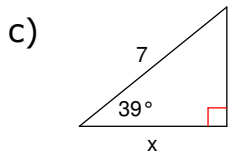
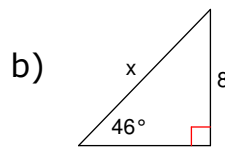
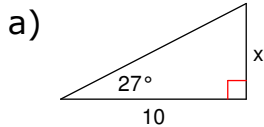
29) Determine the length of the missing hypotenuse.



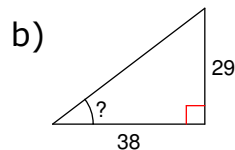
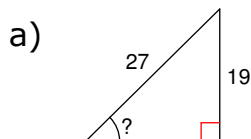
30) Determine the length of the missing side.



31) Find the missing value for each of the following:



32) Find the missing angle for each of the following:



33) A man is walking along a straight road. He notices the top of a tower subtending an angle $A = 60^\circ$ with the ground at the point where he is standing. If the height of the tower is $h = 25$ m, then what is the distance (in meters) of the man from the tower?

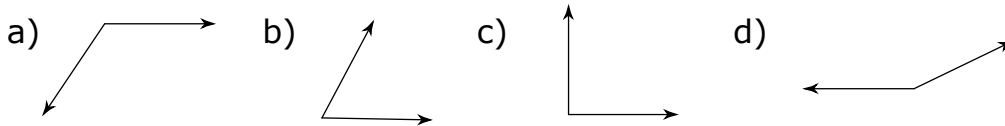
- 34) A little boy is flying a kite. The string of the kite makes an angle of 30° with the ground. If the height of the kite is $h = 18$ m, find the length (in meters) of the string that the boy has used.

Angles & Parallel Lines

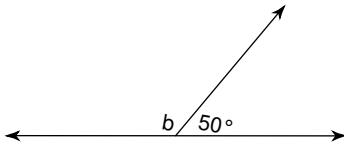
- 35) For each of the following angles, provide a definition and a sketch:

a) acute b) right c) obtuse d) straight e) reflex

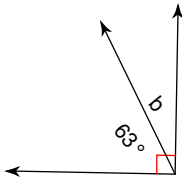
- 36) Classify each of the following angles as acute, right, obtuse, straight or reflex:



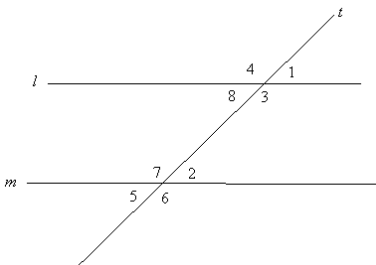
- 37) The following angles are supplementary, find the missing angle.



- 38) The following angles are complementary, find the missing angle.

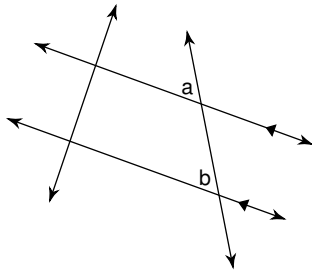


- 39) Given the diagram below, **l** and **m** are parallel lines and **t** is a transversal. If angle 1 has a measure of 34° , find the measures of the other angles in the diagram.

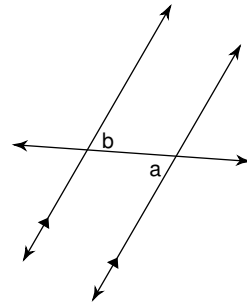


40) Name the relationship: alternate interior, corresponding, or alternate exterior.

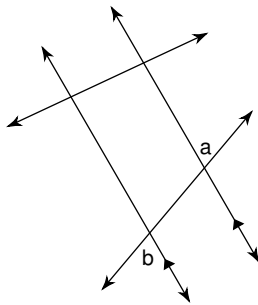
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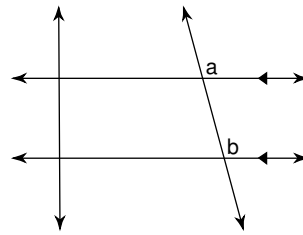
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9)

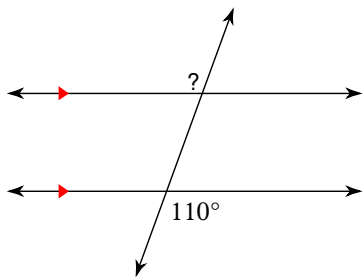


10)

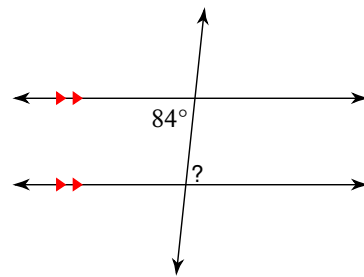


41) In the figures below, line **a** is parallel to line **b** and line **t** is the transversal. Find the measure of each angle indicated.

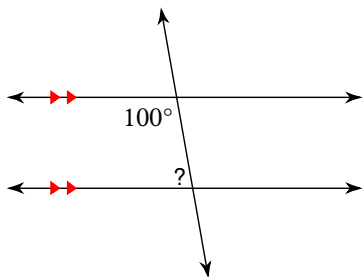
11)



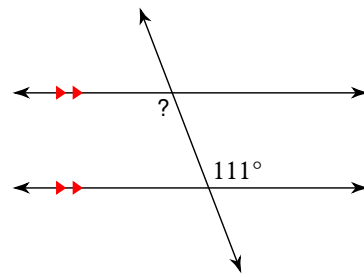
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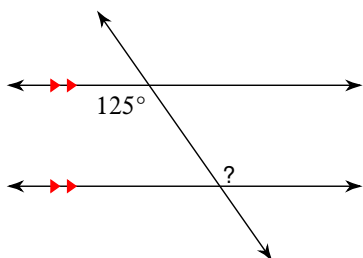
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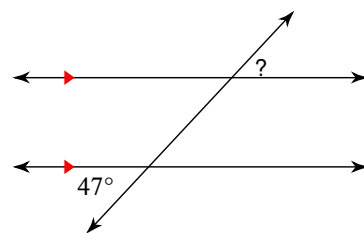
14)



15)



16)

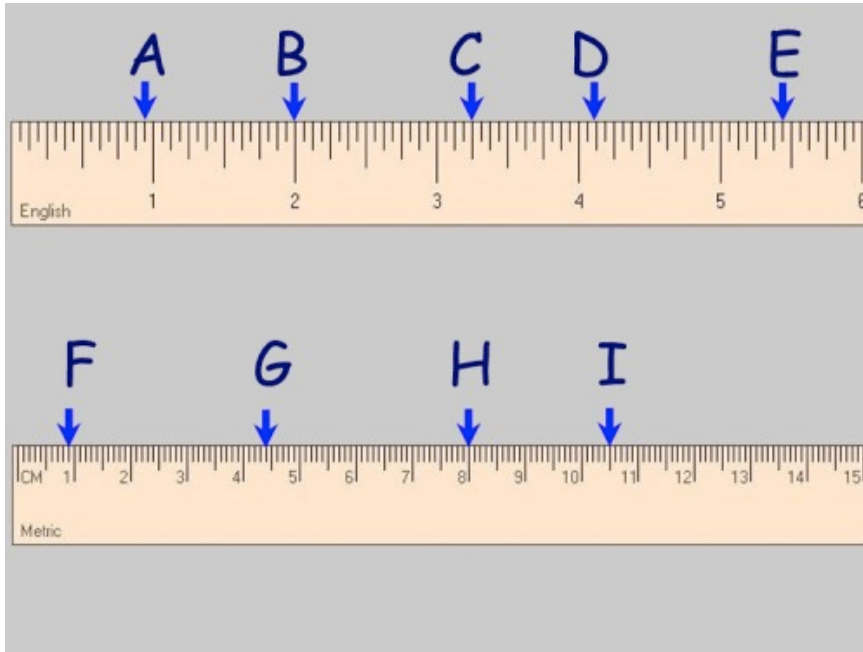


Measurement

42) Determine the most suitable units in both metric and imperial systems for measuring the following items.

	Metric Unit Used	Imperial Unit Used
a) The height a car	_____	_____
b) The distance from Manitoba to BC	_____	_____
c) The thickness of a penny	_____	_____
d) The length of a field	_____	_____

43) Find the measurements represented by each of the arrows on the ruler below.



44) Convert each of the following.

a) 6.3 m = _____ km

b) 550 m = _____ cm

c) 9364 yards = _____ miles

d) 121 ft = _____ in

45) Convert each of the following.

a) $133.5 \text{ yd}^3 = \underline{\hspace{4cm}} \text{ m}^3$

b) $9\frac{1}{2} \text{ ft} = \underline{\hspace{4cm}} \text{ m}$

c) $345 \text{ km} = \underline{\hspace{4cm}} \text{ yd}$

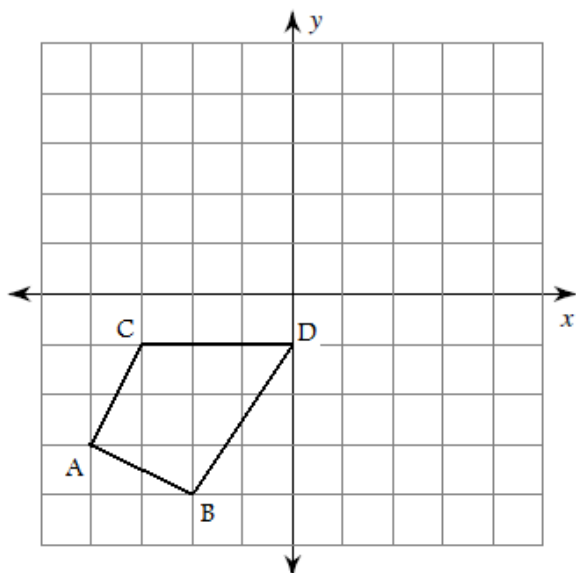
46) When visiting Canada, Cora has a fever with a temperature of 103°F . What is the temperature in Celsius to tell the nurse at the hospital?

47) The temperature for the last three months has ranged from -31°C to $+5^\circ\text{C}$. What is the temperature range in $^\circ\text{F}$?

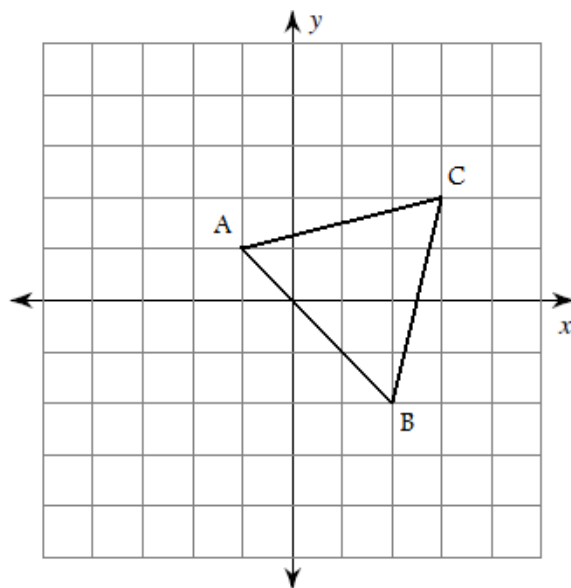
48) Tanner goes to the doctor and find out he weighs 189 lbs. What would this weight be in kilograms? What would his weight be in ounces?

Transformations

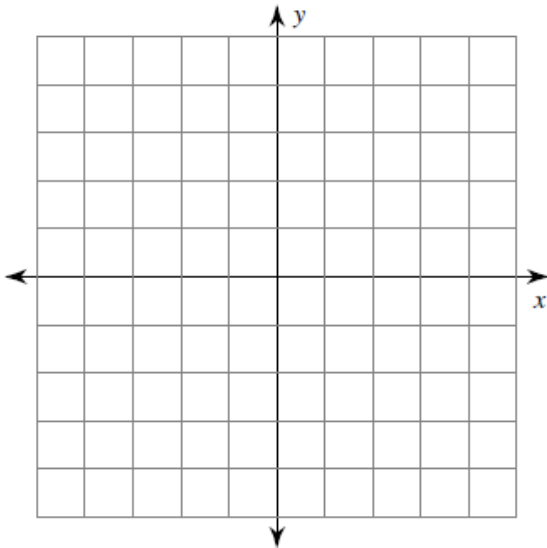
1. Translate: 4 units right and 3 units up



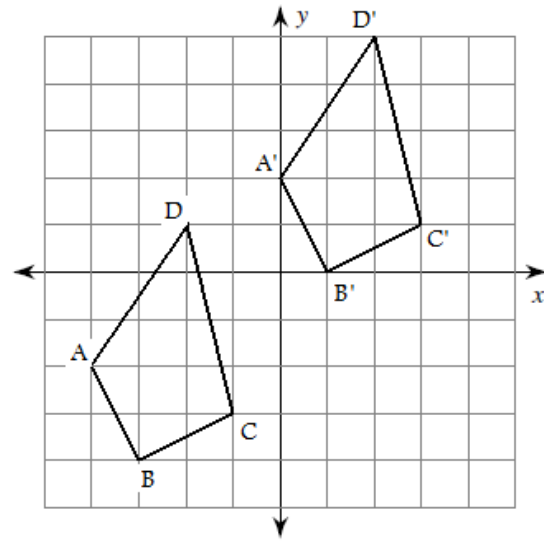
2. Translate: 3 units left and 1 unit down



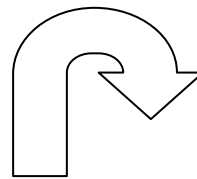
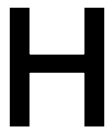
3. Sketch the figure with the following corner points and Translate: 3 units down
 $X(-4, 3)$, $Y(0, 1)$, $Z(-2, -2)$



4. Write a rule to describe the translation shown below. Use only one notation.



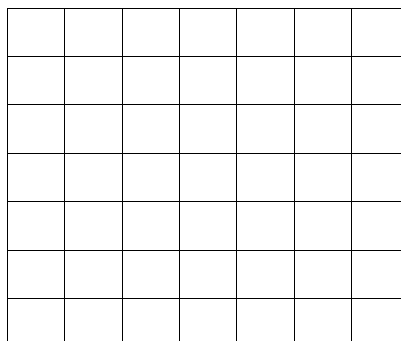
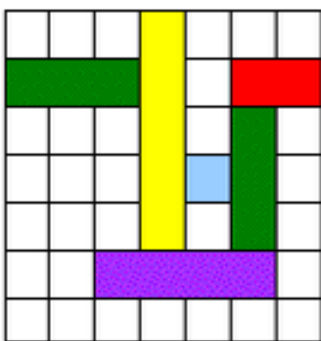
11. Rotate the images below by 90°




12. Rotate the images below by 180°





- 53) Rotate the following image 270° .




54) Given the diagrams below, indicate the reflection using the following notation:

V  indicates the image is reflected over a vertical line

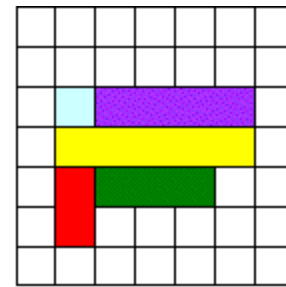
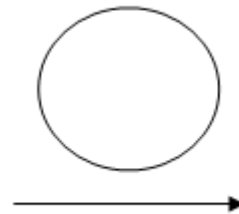
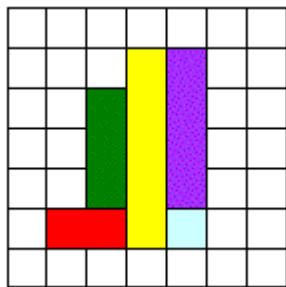
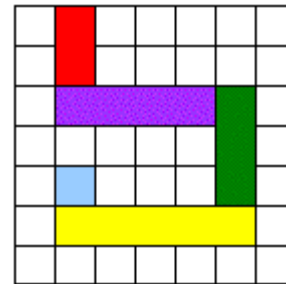
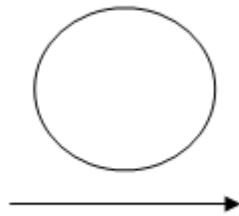
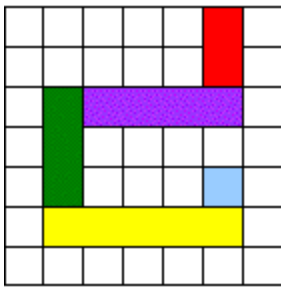
H  indicates the image is reflected over a horizontal line

L  indicates the image is reflected over a left diagonal

R  indicates the image is reflected over a right diagonal

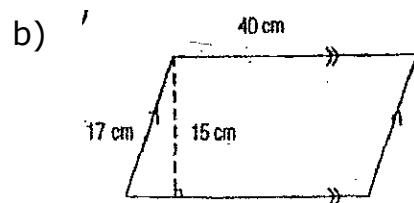
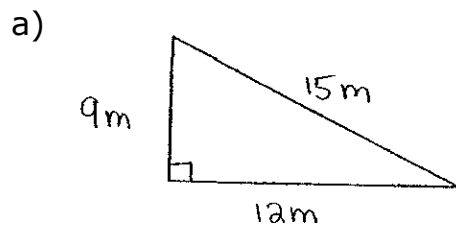
Original

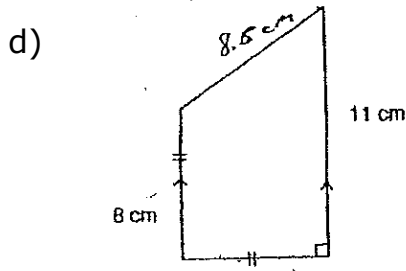
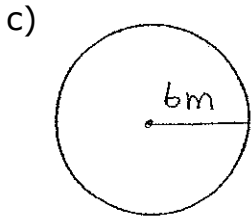
Reflection



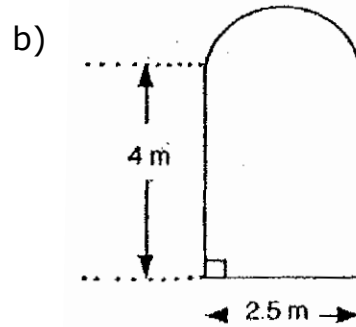
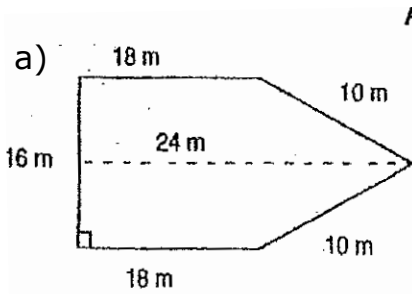
Geometry

55) Calculate the perimeter and area for each of the following:



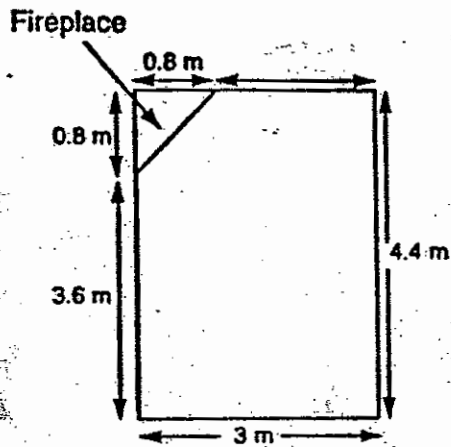


56) Calculate the area for each of the following:



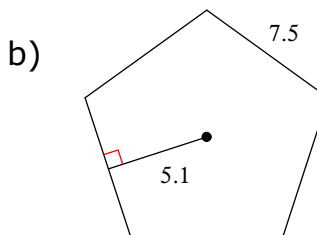
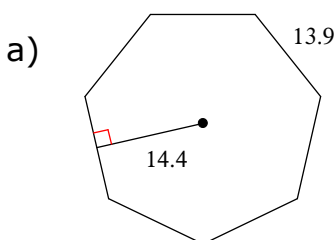
57)

7. The following diagram is an illustration of a family room.



- If the entire family room, other than fireplace is to be carpeted, what area is to be carpeted?
- If the carpeting cost \$14.98 a square metre, how many square metres of carpeting must be purchased for the room?
- What is the cost of the carpeting including tax?

58) Calculate the area of each regular polygon:



- 59) Calculate the area of a pentagon with a perimeter of 54.49 meters and an apothem of 7.5 meters.
- 60) Use the 5-dot one inch grid paper to estimate the area of our school's track.

Scale: $1 \text{ in}^2 = 2 \text{ ft}^2$

