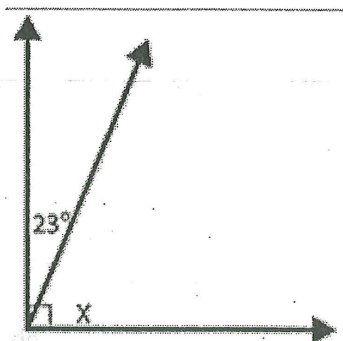


## Shapes and Designs Inv. 1 Quiz Review

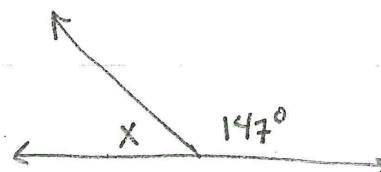
- 1) Are rectangles parallelograms? Explain. Be sure to refer to specific properties of each type of polygon to support your answer.
- 2) Are trapezoids parallelograms? Explain. Be sure to refer to specific properties of each type of polygon to support your answer.
- 3) Which quadrilaterals have 4 right angles?
- 4) Which quadrilaterals have two sets of parallel sides? Only one set of parallel sides?
- 5) Draw and label the following polygons in the space below or on separate paper.
  - a) A rectangle with a base of 8cm and height of 4cm
  - b) A triangle with  $\angle BAC = 75^\circ$ ,  $\angle ABC = 75^\circ$
  - c) A triangle with  $\angle BAC = 75^\circ$ ,  $\angle ABC = 65^\circ$ , and side AB is 4cm

- 6) For each diagram, write and solve an equation to find the value of  $x$ . Then find the missing angle measure.

a)

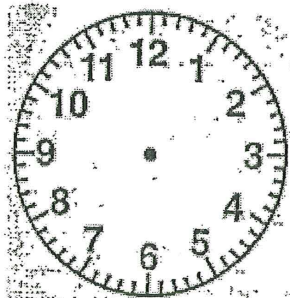


b)



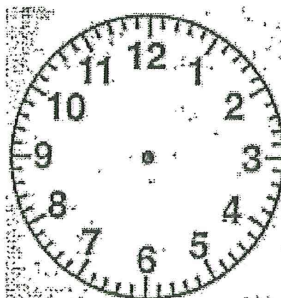
- 7) At the start of each hour, the minute hand on a clock points straight up to the 12. For parts a-c, draw the angle formed by the minute hand at the start of the hour and the minute hand after the given amount of time has passed. Find the measure of the angle without using an angle ruler. Show or explain your work.

a. 5 minutes



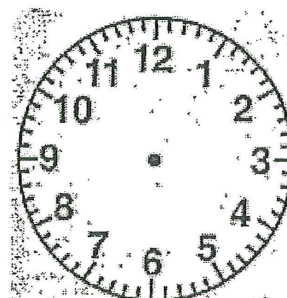
Degree measure:

b. 40 minutes



Degree measure:

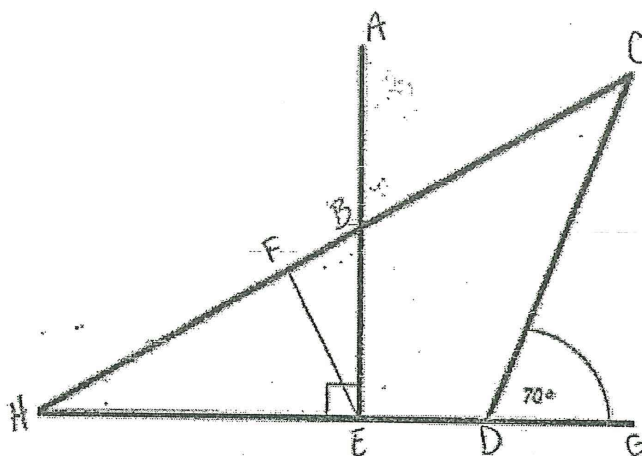
c. 25 minutes



Degree measure:

<p>8) Find the supplement of:</p> <p>a) A <math>24^\circ</math> angle</p> <p>b) A <math>67^\circ</math> angle</p> <p>c) An <math>86^\circ</math> angle</p> <p>d) A <math>130^\circ</math> angle</p>	<p>9) Find the complement of:</p> <p>a) A <math>24^\circ</math> angle</p> <p>b) A <math>67^\circ</math> angle</p> <p>c) An <math>86^\circ</math> angle</p> <p>d) A <math>13^\circ</math> angle</p>
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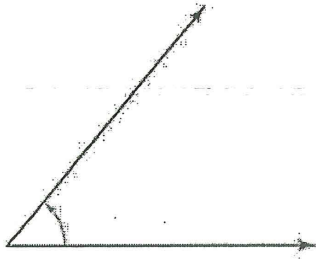
10) Use the diagram below to find the following angles:



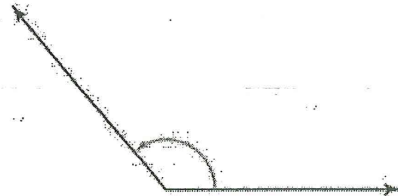
- a) Name an angle that is complementary to  $\angle BEF$ . \_\_\_\_\_
- b) Name an angle that is supplementary to  $\angle ABC$ . \_\_\_\_\_
- c) Find the supplement (degree measure) of  $\angle CDG$ . \_\_\_\_\_
- d) Name two vertical angles. \_\_\_\_\_
- e) Find the measure of  $\angle CDE$ . \_\_\_\_\_

11) Measure the following angles with an angle ruler.

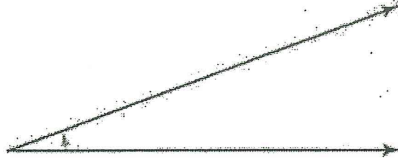
a.



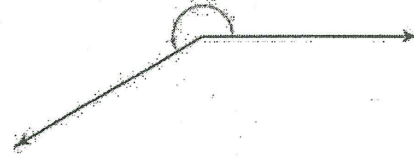
b.



c.



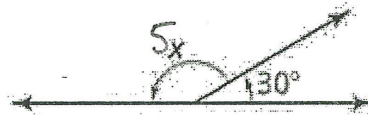
d.



e.



12) Write and solve an equation to find the value of  $x$ . Then find the unknown angle measure.



Name: \_\_\_\_\_ Color: \_\_\_\_\_ Date: \_\_\_\_\_

Shapes and Designs Inv. 1 Quiz Review

- 1) Are rectangles parallelograms? Explain. Be sure to refer to specific properties of each type of polygon to support your answer.

yes - rectangles have two sets of ~~par~~ opposite parallel sides, just like parallelograms

- 2) Are trapezoids parallelograms? Explain. Be sure to refer to specific properties of each type of polygon to support your answer.

No - trapezoids only have one set of opposite parallel sides, parallelograms require 2 sets

- 3) Which quadrilaterals have 4 right angles?

- squares  
- rectangles

- 4) Which quadrilaterals have two sets of parallel sides? Only one set of parallel sides?

two sets: parallelograms  
rectangles  
rhombuses  
squares

one set: trapezoids

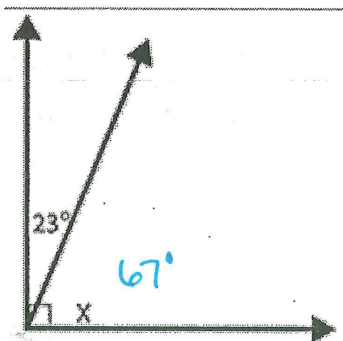
- 5) Draw and label the following polygons in the space below or on separate paper.

- a) A rectangle with a base of 8cm and height of 4cm  
b) A triangle with  $\angle BAC = 75^\circ$ ,  $\angle ABC = 75^\circ$   
c) A triangle with  $\angle BAC = 75^\circ$ ,  $\angle ABC = 65^\circ$ , and side AB is 4cm

(last page)

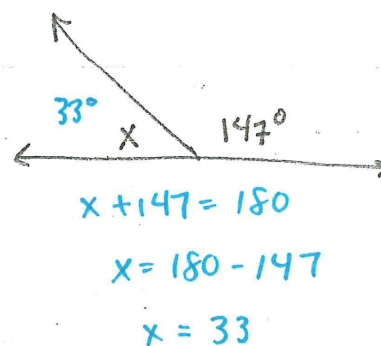
- 6) For each diagram, write and solve an equation to find the value of  $x$ . Then find the missing angle measure.

a)



$$\begin{aligned}x + 23 &= 90 \\x &= 90 - 23 \\x &= 67\end{aligned}$$

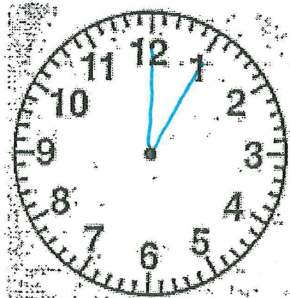
b)



$$\begin{aligned}x + 147 &= 180 \\x &= 180 - 147 \\x &= 33\end{aligned}$$

- 7) At the start of each hour, the minute hand on a clock points straight up to the 12. For parts a-c, draw the angle formed by the minute hand at the start of the hour and the minute hand after the given amount of time has passed. Find the measure of the angle without using an angle ruler. Show or explain your work.

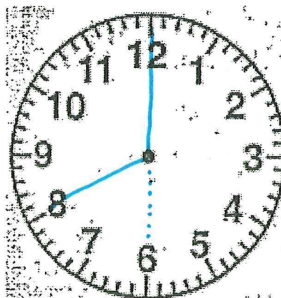
a. 5 minutes



Degree measure:  $30^\circ$

$$\frac{1}{3} \times 90 = 30$$

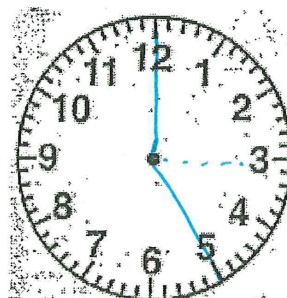
b. 40 minutes



Degree measure:  $240^\circ$

$$\begin{aligned}180 + \left(\frac{2}{3} \cdot 90\right) \\180 + 60 \\270 - \left(\frac{1}{3} \cdot 90\right)\end{aligned}$$

c. 25 minutes



Degree measure:  $150^\circ$

$$\begin{aligned}90 + \left(\frac{2}{3} \cdot 90\right) \\90 + 60 \\180 - \left(\frac{1}{3} \cdot 90\right) \\180 - 30\end{aligned}$$



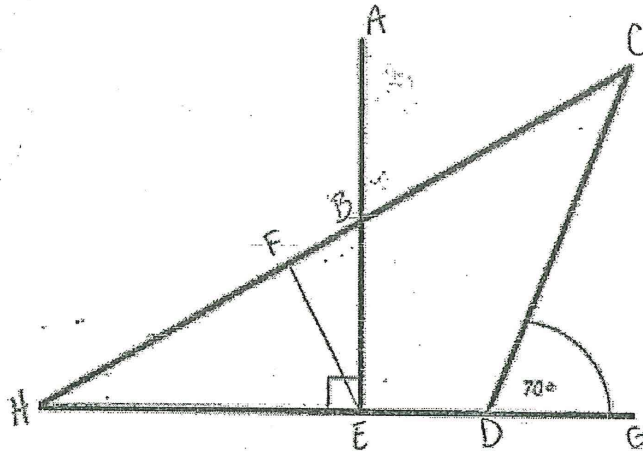
8) Find the supplement of:

- a) A  $24^\circ$  angle  $156^\circ$
- b) A  $67^\circ$  angle  $113^\circ$
- c) An  $86^\circ$  angle  $94^\circ$
- d) A  $130^\circ$  angle  $50^\circ$

9) Find the complement of:

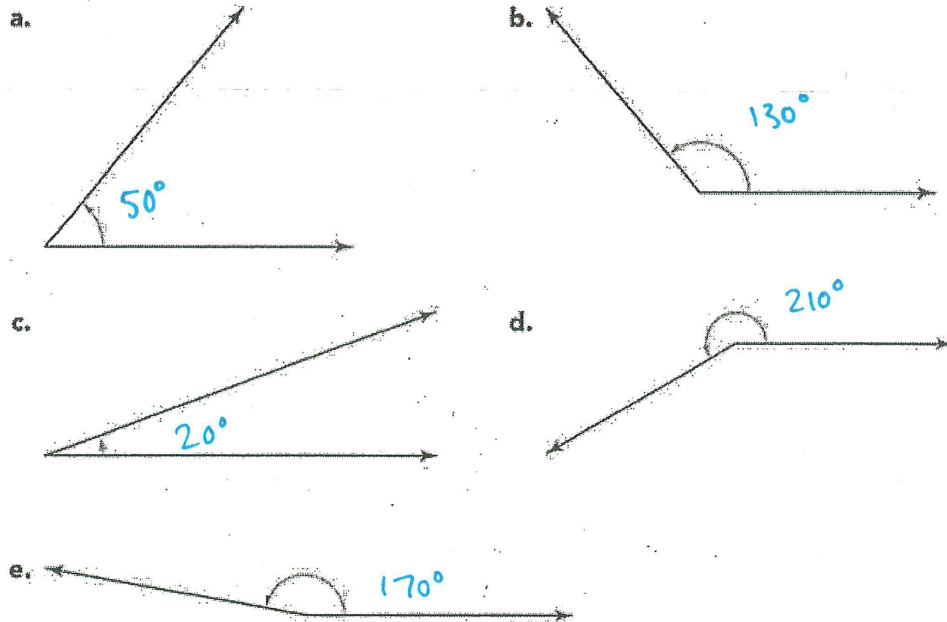
- a) A  $24^\circ$  angle  $66^\circ$
- b) A  $67^\circ$  angle  $23^\circ$
- c) An  $86^\circ$  angle  $4^\circ$
- d) A  $13^\circ$  angle  $77^\circ$

10) Use the diagram below to find the following angles:

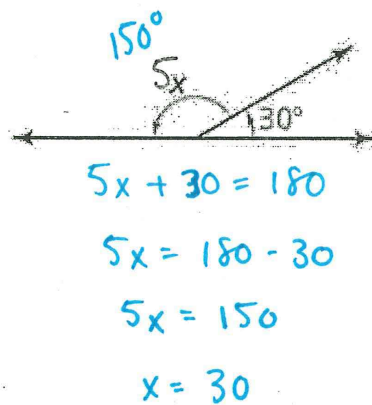


- a) Name an angle that is complementary to  $\angle BEF$ .  $\angle FEH$
- b) Name an angle that is supplementary to  $\angle ABC$ .  $\angle ABH$  or  $\angle CBE$
- c) Find the supplement (degree measure) of  $\angle CDG$ .  $110^\circ$ , or  $\angle CDE$
- d) Name two vertical angles.  $\angle ABC$  and  $\angle EBH$   
 $\angle ABH$  and  $\angle CBE$
- e) Find the measure of  $\angle CDE$ .  $110^\circ$

11) Measure the following angles with an angle ruler.

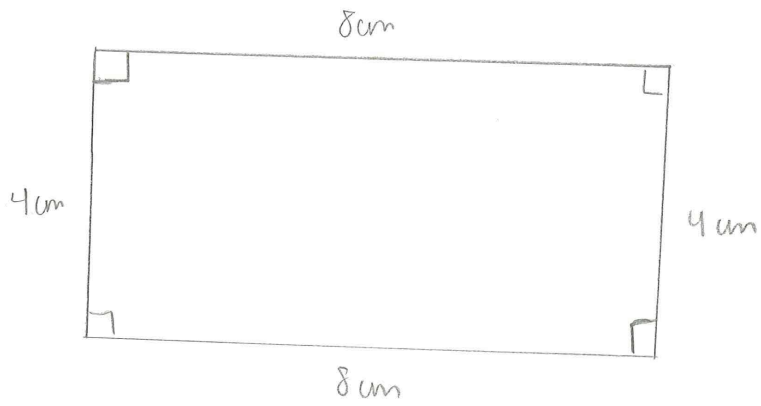


12) Write and solve an equation to find the value of  $x$ . Then find the unknown angle measure.

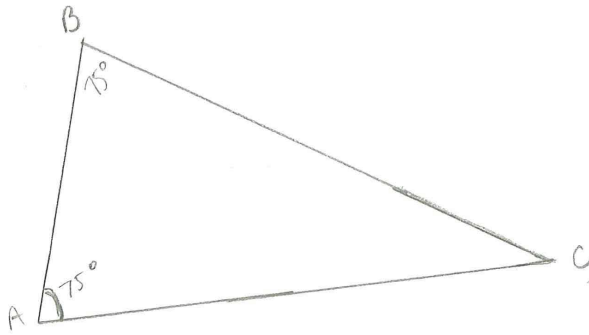




5a)



b)



c)

