

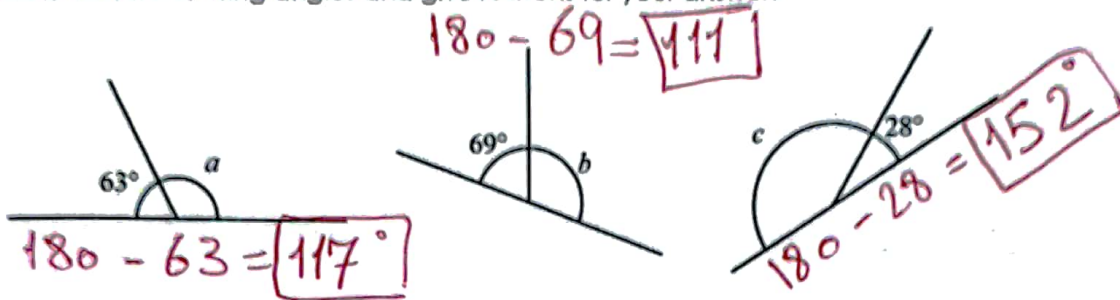
Pop Quiz

Model Answer

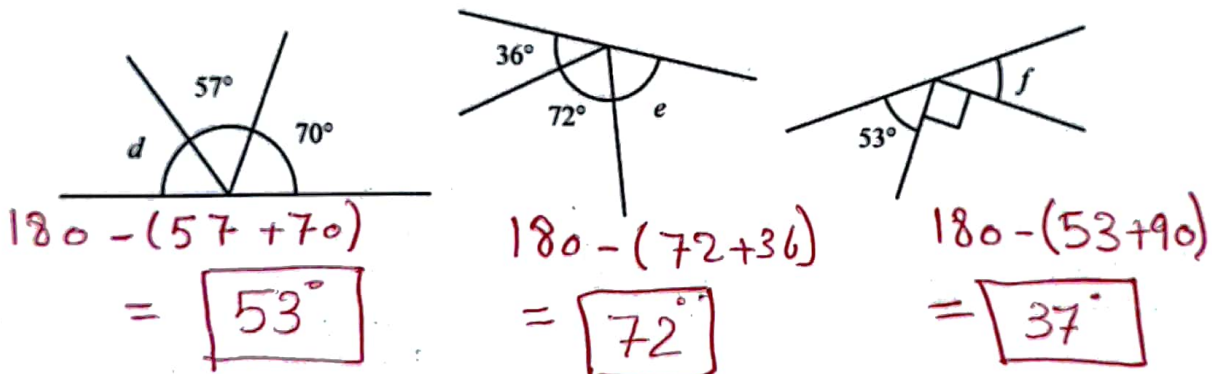
## Angles about a Point and on a Straight line

### Exercise 1: Angles on a Straight line

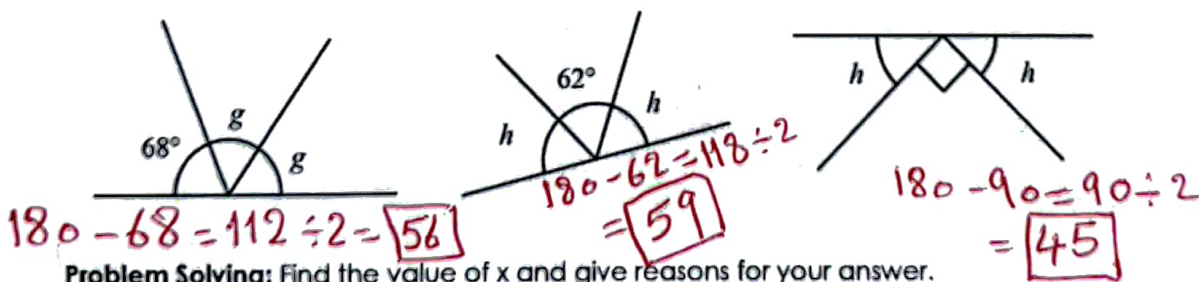
Green: Find the missing angles and give reasons for your answers



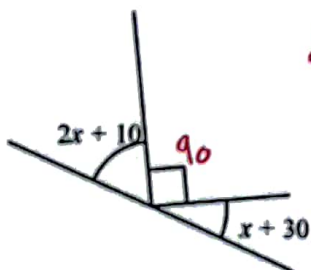
Orange: Find the missing angles and give reasons for your answers



Red: Find the missing angles and give reasons for your answers



Problem Solving: Find the value of  $x$  and give reasons for your answer.



$$2x + 10 + 90 + x + 30 = 180$$

$$3x + 130 = 180$$

$$3x = 180 - 130$$

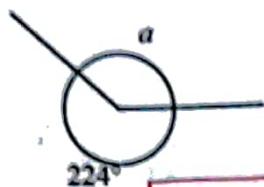
$$3x = 50$$

$$x = 16.6$$

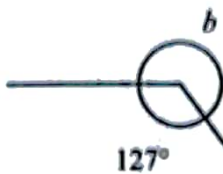
Reason: Angles on a straight line

**Exercise 2: Angles about a Point**

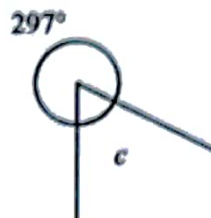
**Green:** Find the missing angles and give reasons for your answers



$$360 - 224 = \boxed{136}$$



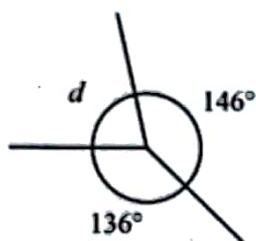
$$360 - 127 = \boxed{233}$$



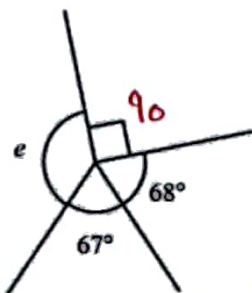
$$360 - 297 = \boxed{63}$$

Reason: Angles about a point

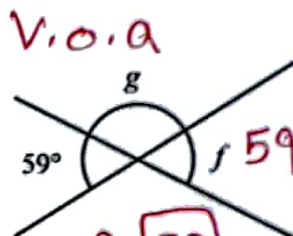
**Orange:** Find the missing angles and give reasons for your answers



$$360 - (136 + 146) = \boxed{78}$$



$$360 - (90 + 68 + 67) = \boxed{135}$$



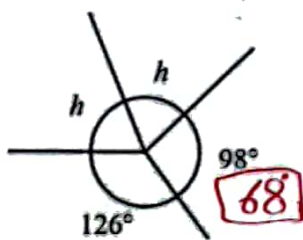
V.O.A

$$f = \boxed{59} \text{ v.o.a}$$

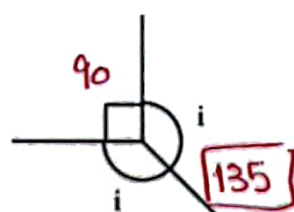
$$g = 180 - 59 = \boxed{121}$$

angles on a st. line

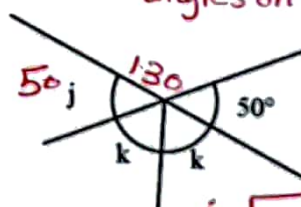
**Red:** Find the missing angles and give reasons for your answers



$$360 - (126 + 98) = 136 \div 2 = \boxed{68}$$



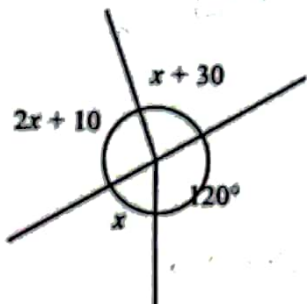
$$360 - 90 = 270 \div 2 = \boxed{135}$$



$$j = \boxed{50} \text{ v.o.a}$$

$$k = 130 \div 2 = \boxed{65}$$

**Problem Solving:** Find the value of  $x$  and give reasons for your answer.



$$2x + 10 + x + 30 + 120 + x = 360$$

$$4x + 160 = 360$$

$$4x = 360 - 160$$

$$4x = 200$$

$$x = \frac{200}{4} = \boxed{50}$$

$$\boxed{\dots}$$

$$\boxed{20}$$