



SUMMIT EDUCATION

Mathematics

Worksheet

Maths-Year6-1

Q1

What type of angle is this?



acute right obtuse straight reflex

Q2

What type of angle is this?



acute right obtuse straight reflex

Q3

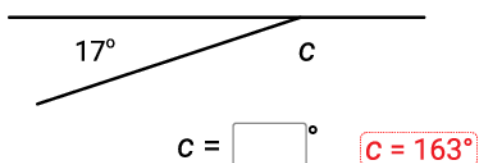
What type of angle is this?



acute right obtuse straight reflex

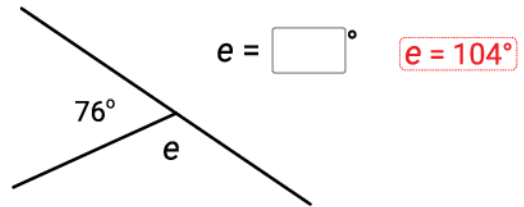
Q4

Find the value of c .



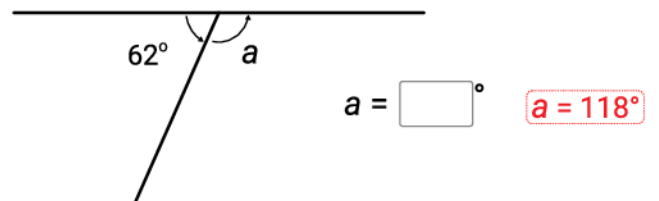
Q5

Find the value of e .



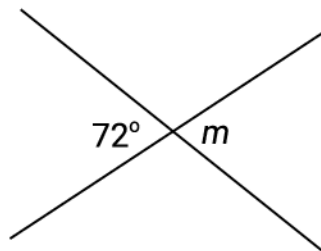
Q6

Find the value of a .



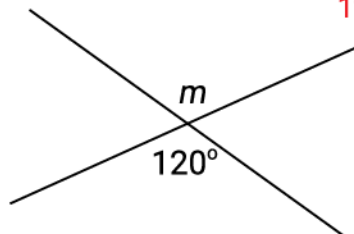
Q7

Find the value of m . $\boxed{}^\circ$



Q8

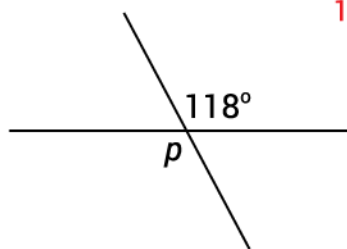
Find the value of m . $\boxed{}^\circ$



Q9

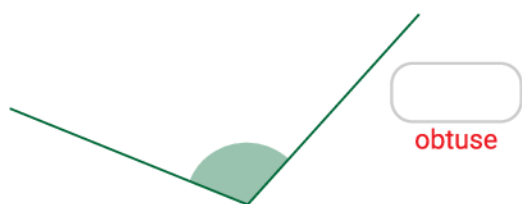
Find the value of p . °

118°



Q10

What type of angle is this?



obtuse

acute right obtuse straight reflex

Q11

What type of angle is this?

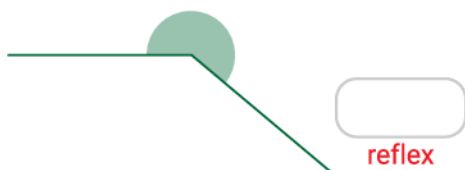


reflex

acute right obtuse straight reflex

Q12

What type of angle is this?



reflex

acute right obtuse straight reflex

Q13

What type of angle is this?

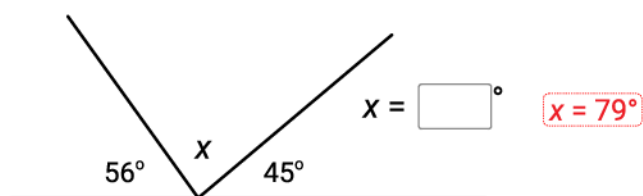


reflex

acute right obtuse straight reflex

Q14

Find the value of x .

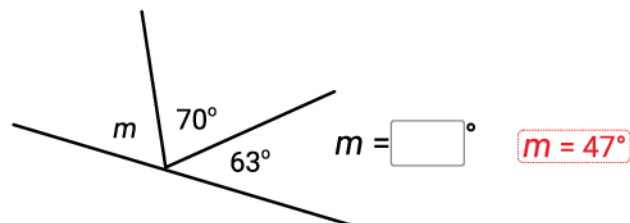


$x =$ °

$x = 79°$

Q15

Find the value of m .

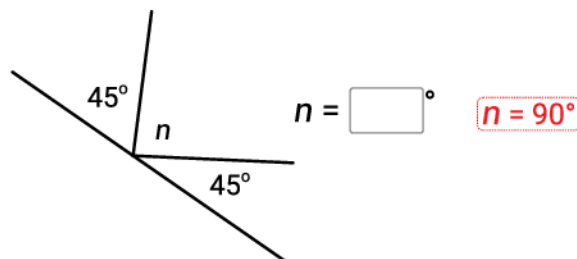


$m =$ °

$m = 47°$

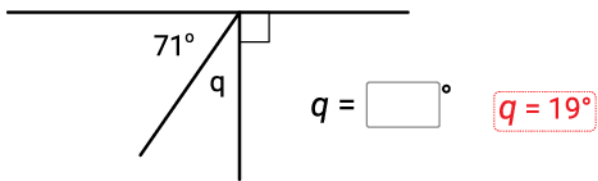
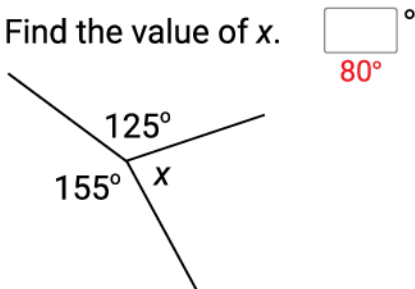
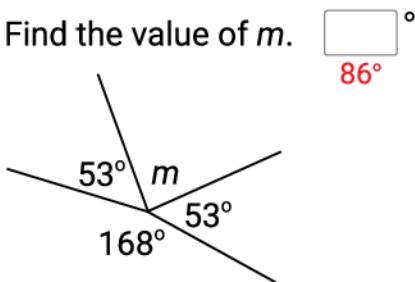
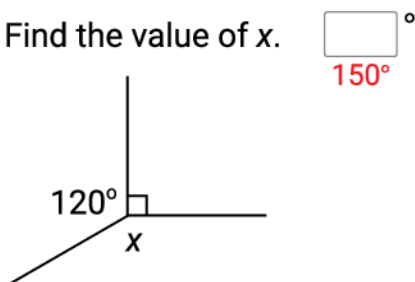
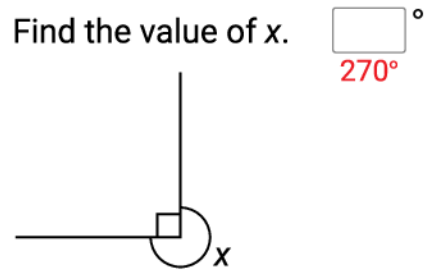
Q16

Find the value of n .



$n =$ °

$n = 90°$

Q17Find the value of q .**Q18**Find the value of x .**Q19**Find the value of m .**Q20**Find the value of x .**Q21**Find the value of x .**Q22**

What type of angle is this?



straight

acute right obtuse straight reflex

Q23

What type of angle is this?

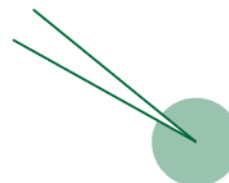


reflex

acute right obtuse straight reflex

Q24

What type of angle is this?

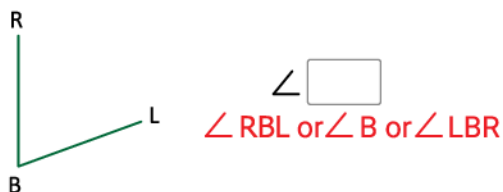


reflex

acute right obtuse straight reflex

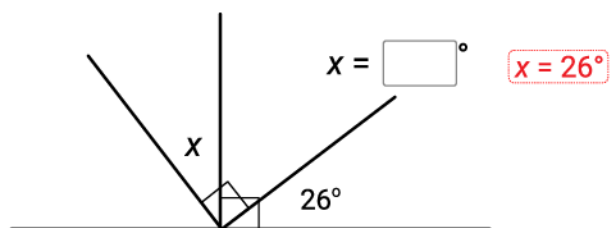
Q25

Name the angle (using letters) below.



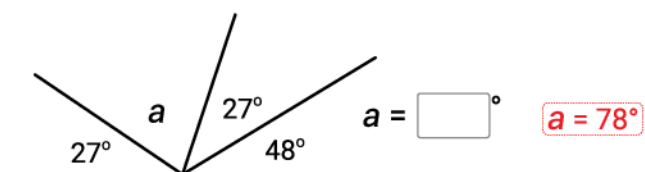
Q26

Find the value of x .



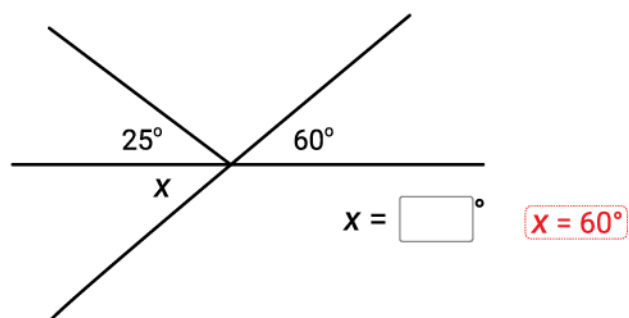
Q27

Find the value of a .



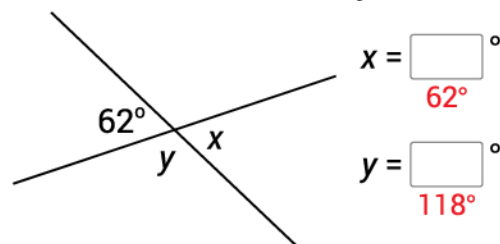
Q28

Find the value of x .



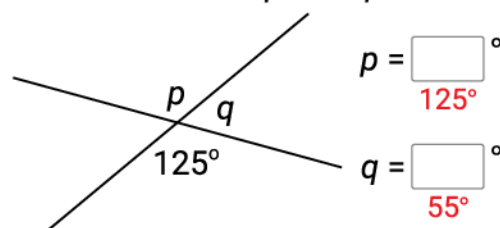
Q29

Find the value of x and y .



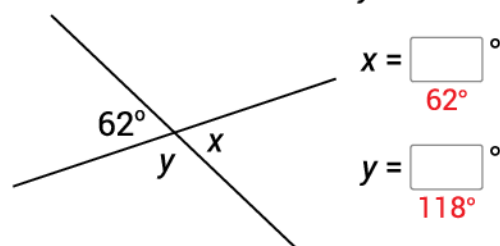
Q30

Find the value of p and q .



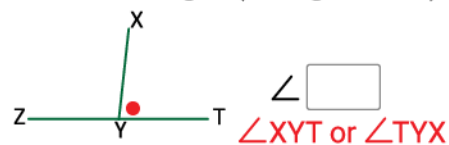
Q31

Find the value of x and y .



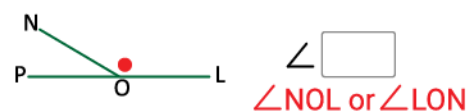
Q32

Name the angle (using letters) below.



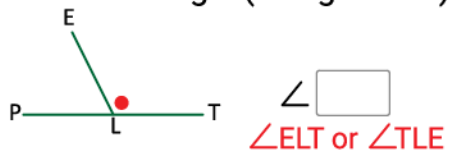
Q33

Name the angle (using letters) below.



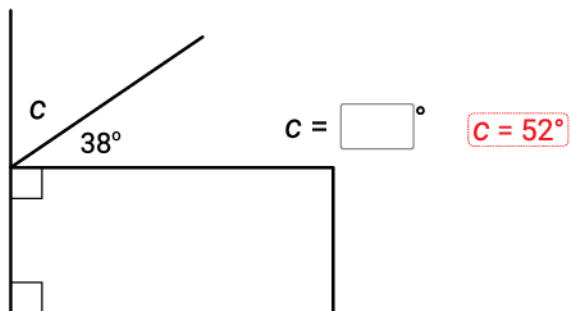
Q34

Name the angle (using letters) below.



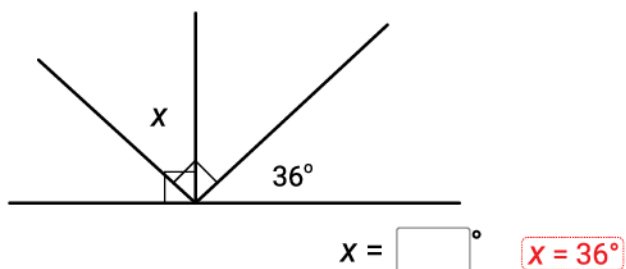
Q35

Find the value of c .



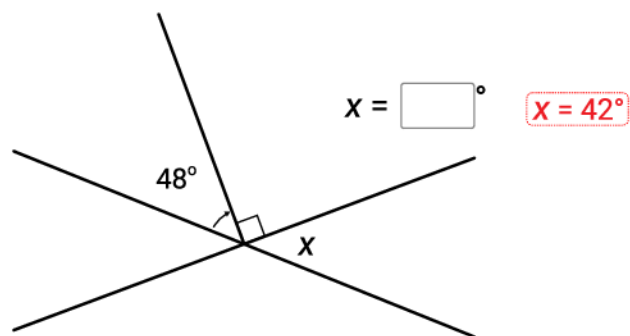
Q36

Find the value of x .



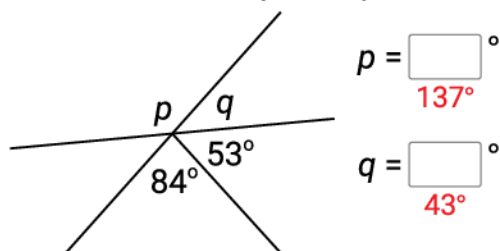
Q37

Find the value of x .



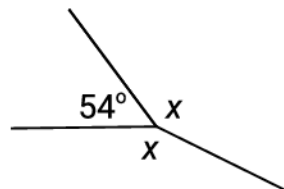
Q38

Find the value of p and q .



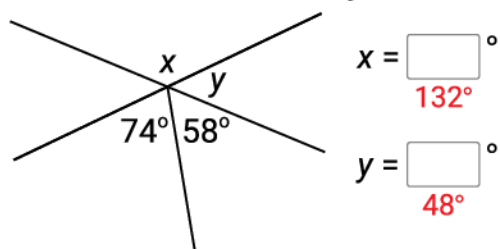
Q39

Find the value of x .



Q40

Find the value of x and y .



y6math1 Hard Answers

Answer Key

Question 1:

Jamal draws an angle and measures it at 116° . What type of angle is it? Its supplementary angle is x° . Find x and state what type of angle the supplementary angle is.

Answer: 116° is obtuse ($90^\circ < x < 180^\circ$). $x = 180 - 116 = 64^\circ$. 64° is acute.

Question 2:

A clock shows 3:45. What is the angle between the hour hand and the minute hand? Explain whether this angle is acute, obtuse, or reflex.

Answer: Minute hand at 3:45 is on 9 (270°). Hour hand at 3.75 h = $3.75 \times 30 = 112.5^\circ$. Difference = $270 - 112.5 = 157.5^\circ$, which is obtuse.

Question 3:

At a point, three angles meet: 47° , 88° , and m° . The total around the point is 360° . Find m° and classify all three angles by type.

Answer: $m = 360 - 47 - 88 = 225^\circ$. 47° acute, 88° acute, 225° reflex.

Question 4:

Two straight lines cross, creating four angles. One angle is 112° . Name the type of each angle. Find the size of the other three angles and state which ones are vertically opposite.

Answer: 112° is obtuse. Adjacent = $180 - 112 = 68^\circ$ (acute). Vertically opposite pairs: 112° and 112° , 68° and 68° .

Question 5:

A right angle is divided into two angles by a ray. One angle is 36° . The other is y° . Find y . If the smaller angle is doubled, is the pair still complementary? Explain.

Answer: $y = 90 - 36 = 54^\circ$. Doubling 36 gives 72° ; $72 + 54 = 126 \neq 90$, so no longer complementary.

Question 6:

Sofia constructs an angle labelled RST using the letter R, S, T. If angle RST = 74° and angle TSV = 29° lie on a straight line R-S-V, find angle VSR.

Answer: On straight line R-S-V, angle VSR = $180 - 74 - 29 = 77^\circ$.

Question 7:

An angle measures 168° . State its type. Find its reflex angle and its supplementary angle. What is the difference between the reflex angle and the supplementary angle?

Answer: 168° is obtuse. Reflex = $360 - 168 = 192^\circ$. Supplementary = $180 - 168 = 12^\circ$. Difference = $192 - 12 = 180^\circ$.

Question 8:

A straight angle is split into four parts: a° , b° , c° , and d° . The first three are 39° , 52° , and 67° . Find d° . If each part were doubled, would they still lie on a straight line? Show working.

Answer: $d = 180 - 39 - 52 - 67 = 22^\circ$. Doubled: $78 + 104 + 134 + 44 = 360 \neq 180$, so no, they would form a revolution, not a straight line.

Question 9:

Ben says: 'A reflex angle is bigger than a straight angle but smaller than a revolution.' Give two example measures that are reflex angles, and state their supplementary angles.

Answer: Example reflex angles: 200° and 300° . Supplementary: $200^\circ \rightarrow 160^\circ$ (negative for 300° : -120° , which is not a real angle), so reflex angles over 180° have no positive supplement.

Question 10:

At a point, four angles measure $5x$, $3x$, $2x$, and $2x$ degrees, and they total 360° . Find x and the size of each angle. Classify the largest angle by type.

Answer: $12x = 360$, $x = 30^\circ$. Angles: 150° , 90° , 60° , 60° . Largest 150° is obtuse.

Question 11:

A triangle has one angle of 43° . The other two are equal. Find their sizes and name the triangle's angle type. If one equal angle is increased by 17° , find the new third angle.

Answer: Other two = $(180 - 43) \div 2 = 68.5^\circ$ each. Triangle is acute. Increase one to 85.5 : third = $180 - 43 - 85.5 = 51.5^\circ$.

Question 12:

Using letters, PQR is an angle where QR is a straight line from P to R. If angle PQS = $3y$ and angle SQR = y , and they together form a straight angle, find y and both angles.

Answer: $3y + y = 180$, $4y = 180$, $y = 45^\circ$. Angles: 135° and 45° .

Question 13:

An angle measures 144° and its supplement is 36° . How many times larger is the 144° angle than its supplement? What type of angle is the 144° angle? If the 144° angle is increased by 25%, find the new supplement.

Answer: $144 \div 36 = 4$ times. 144° is obtuse ($90^\circ < 144^\circ < 180^\circ$). Increased by 25%: $144 \times 1.25 = 180^\circ$. New supplement = $180 - 180 = 0^\circ$.

Question 14:

Lily looks at an angle of 5° and says it is acute. What is its reflex angle? How many 5° angles fit into one full revolution of 360° ?

Answer: Reflex angle of $5^\circ = 360 - 5 = 355^\circ$. $360 \div 5 = 72$ angles fit in a revolution.

Question 15:

A diagram shows two vertically opposite pairs. One angle is $8z - 20$ and the opposite angle is $2z + 40$. Find z and the size of all four angles, then classify each type.

Answer: $8z - 20 = 2z + 40 \rightarrow 6z = 60$, $z = 10$. Angles: 60° and 60° (acute); adjacent = $180 - 60 = 120^\circ$ (obtuse). Four angles: 60, 120, 60, 120.