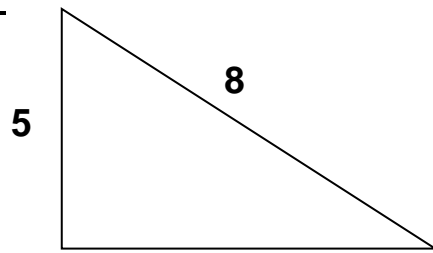
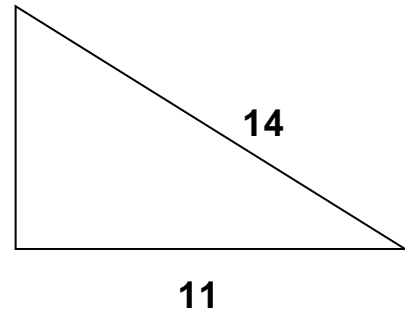


## Calculate the Areas of the following Triangles

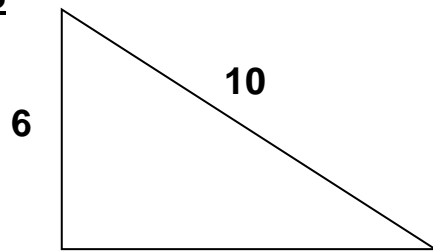
Q. 1



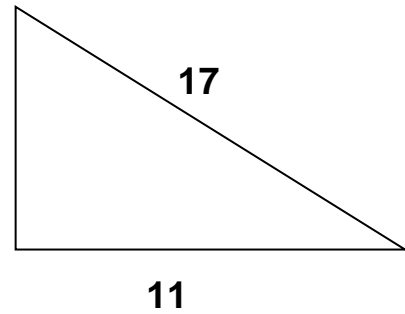
Q. 2



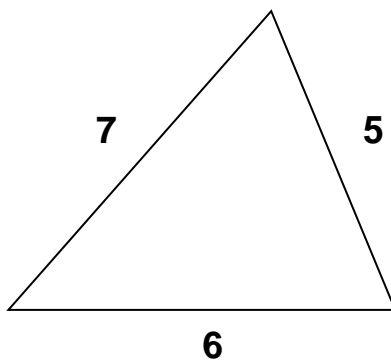
Q. 3



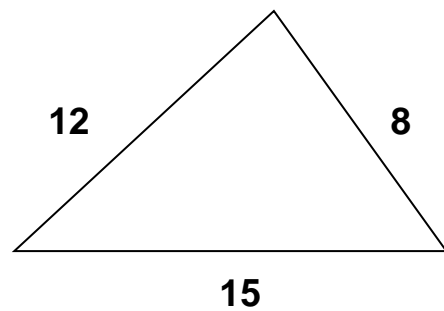
Q. 4



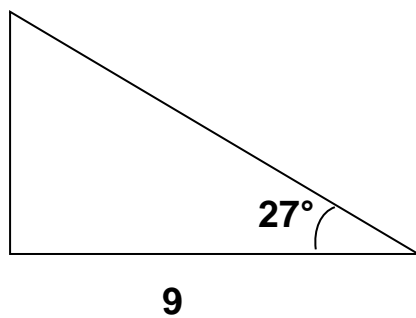
Q. 5



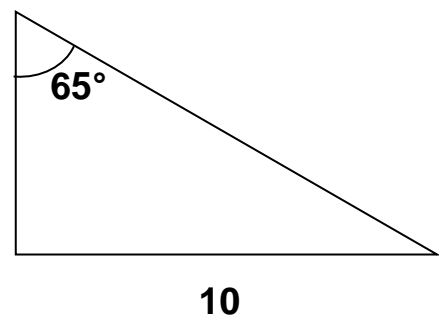
Q. 6



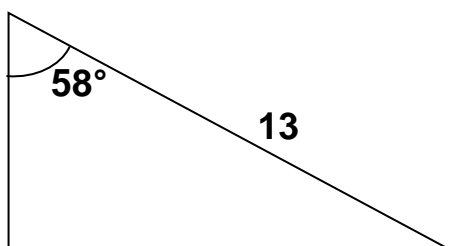
Q. 7



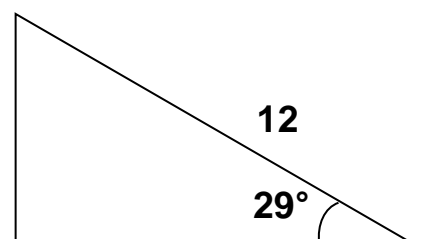
Q. 8



Q. 9

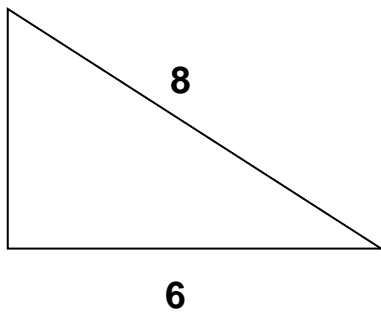


Q. 10

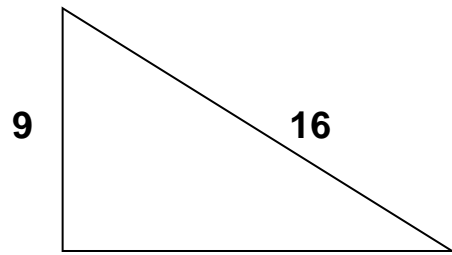


## Calculate the Areas of the following Triangles

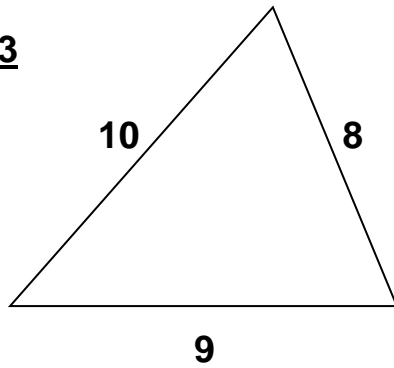
Q. 11



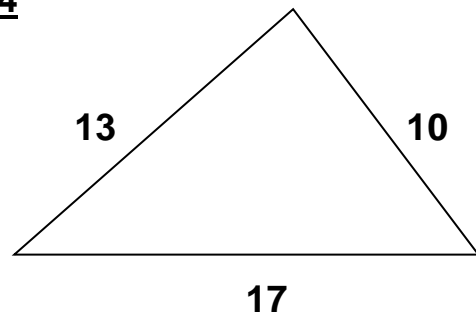
Q. 12



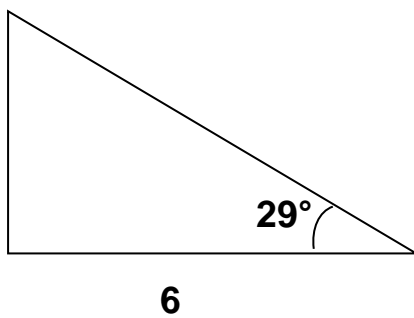
Q. 13



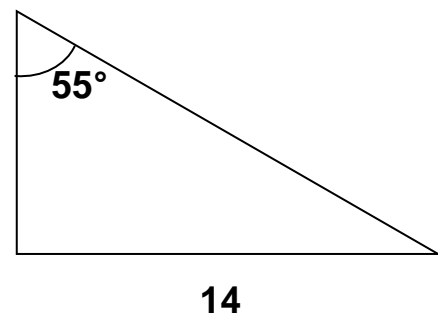
Q. 14



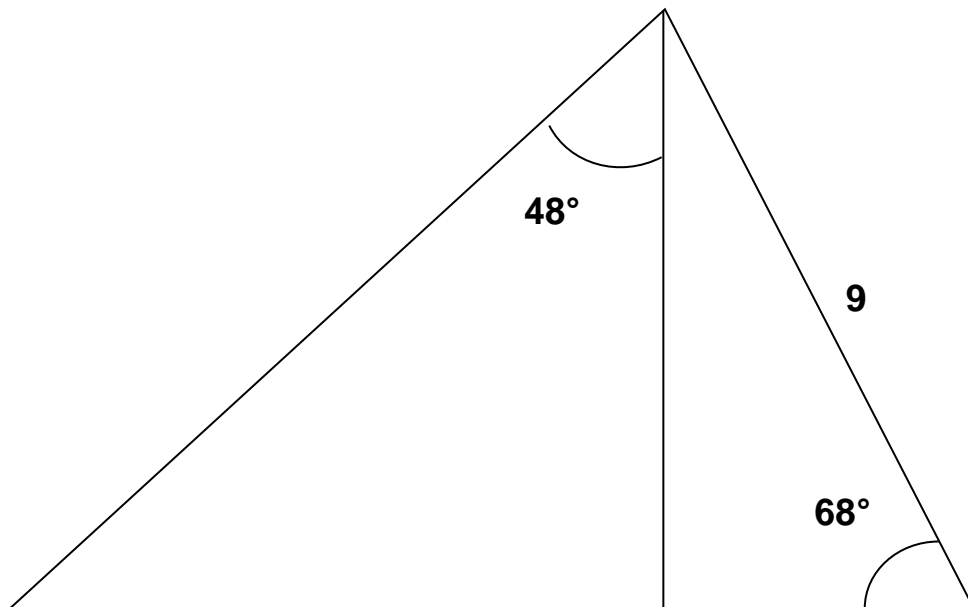
Q. 15



Q. 16

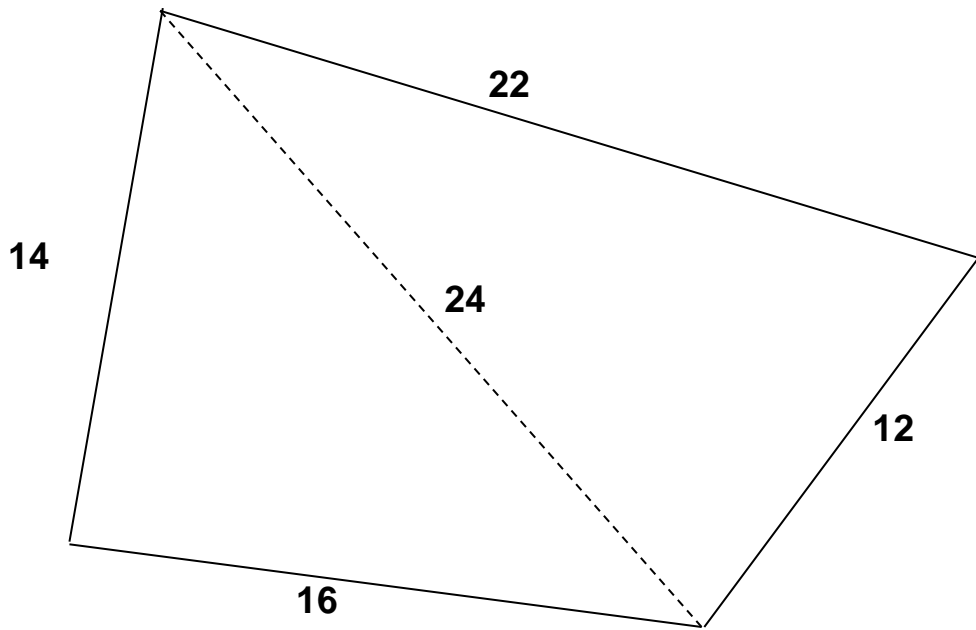


Q. 17

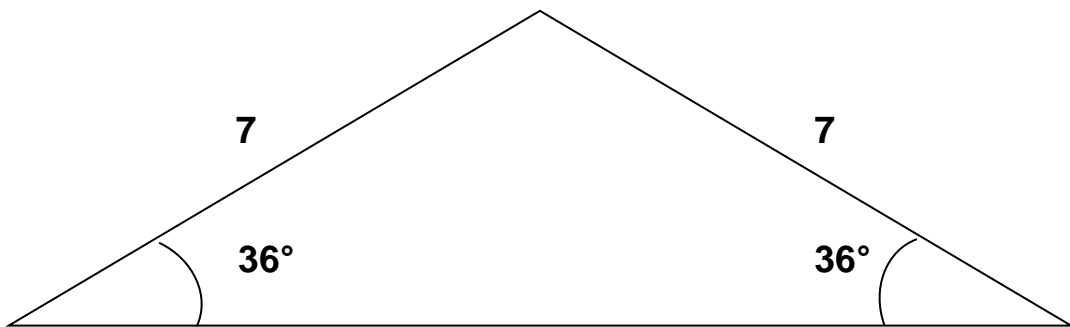


**Calculate the Areas of the following:**

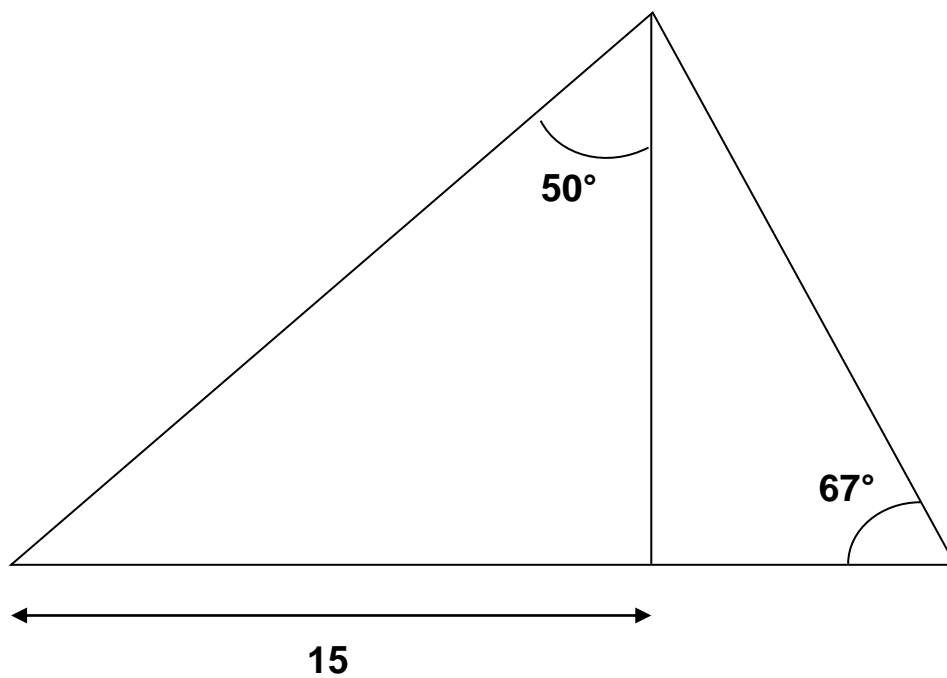
**Q. 18**



**Q. 19**



**Q. 20**





## Answers - (continued)

**Q. 10**

$$\cos 29^\circ = \frac{x}{12}$$

$$0.8746 = \frac{x}{12}$$

$$x = 0.8746 \times 12$$

$$x = \mathbf{10.495}$$

$$\text{Area} = 0.5 \times 10.495 \times 5.818 = \mathbf{30.53^2}$$

$$a^2 = c^2 - b^2$$

$$x^2 = 12^2 - 10.495^2$$

$$x^2 = 144 - 110.154$$

$$x = \sqrt{33.846}$$

$$x = \mathbf{5.818}$$

**Q. 11**

$$x^2 = 8^2 - 6^2$$

$$x^2 = 64 - 36$$

$$x = \sqrt{28}$$

$$x = \mathbf{5.292}$$

$$\text{Area} = 0.5 \times 5.292 \times 6 \\ = \mathbf{15.875^2}$$

**Q. 12**

$$x^2 = 16^2 - 9^2$$

$$x^2 = 256 - 81$$

$$x = \sqrt{175}$$

$$x = \mathbf{13.229}$$

$$\text{Area} = 0.5 \times 13.229 \times 9 \\ = \mathbf{59.53^2}$$

**Q. 13**  $10+9+8 = 27/2 = 13.5 \Rightarrow$

$$\sqrt{13.5(13.5-10)(13.5-9)(13.5-8)}$$

$$\sqrt{13.5(3.5)(4.5)(5.5)}$$

$$\sqrt{1169.4375} = \mathbf{34.197^2}$$

**Q. 14**  $17+13+10 = 40/2 = 20 \Rightarrow$

$$\sqrt{20(20-17)(20-13)(20-10)}$$

$$\sqrt{20(3)(7)(10)}$$

$$\sqrt{4200} = \mathbf{64.807^2}$$

**Q. 15**

$$\tan 29 = \frac{x}{6}$$

$$0.5543 = \frac{x}{6}$$

$$x = 0.5543 \times 6$$

$$x = \mathbf{3.326}$$

$$\text{Area} = 0.5 \times 3.326 \times 6 \\ = \mathbf{9.978^2}$$

**Q. 16**

$$\tan 55 = \frac{14}{x}$$

$$1.4281 = \frac{14}{x}$$

$$x = \frac{14}{1.4281}$$

$$x = \mathbf{9.803}$$

$$\text{Area} = 0.5 \times 9.803 \times 14 \\ = \mathbf{68.621^2}$$

## Answers - (continued)

<p><b>Q.17</b></p> $\sin 68^\circ = \frac{x}{9}$ $0.9272 = \frac{x}{9}$ $x = 0.9272 * 9$ $x = \mathbf{8.345}$	$\tan 48^\circ = \frac{x}{8.345}$ $1.1106 = \frac{x}{8.345}$ $x = 1.1106 * 8.345$ $x = \mathbf{9.268}$	$a^2 = c^2 - b^2$ $x^2 = 9^2 - 8.345^2$ $x^2 = 81 - 69.639$ $x = \sqrt{11.311}$ $x = \mathbf{3.363}$
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**Total Base** = 9.268 + 3.363 = 12.631  
**=> Area** = 0.5 x 12.631 x 8.345 = **52.703<sup>2</sup>**

**Q. 18** 24+22+12 = 58/2 =29 =>  $\sqrt{29(29-24)(29-22)(29-12)}$   
 $\sqrt{29(5)(7)(17)}$   
 $\sqrt{17255} = \mathbf{131.358^2}$

24+16+14 = 54/2 =27 =>  $\sqrt{27(27-24)(27-16)(27-14)}$   
 $\sqrt{27(3)(11)(13)}$   
 $\sqrt{11583} = \mathbf{\frac{107.624^2}{239.982^2}}$

<p><b>Q. 19</b></p> $\cos 36^\circ = \frac{x}{7}$ $0.809 = \frac{x}{7}$ $x = 0.809 * 7$ $x = \mathbf{5.663}$	$a^2 = c^2 - b^2$ $x^2 = 7^2 - 5.663^2$ $x^2 = 49 - 32.070$ $x = \sqrt{16.93}$ $x = \mathbf{4.115}$
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**=> Area** = 2(0.5 x 5.663 x 4.115) = **23.303<sup>2</sup>**

<p><b>Q. 20</b></p> $\tan 50^\circ = \frac{15}{x}$ $1.1918 = \frac{15}{x}$ $x = \frac{15}{1.1918}$ $x = \mathbf{12.586}$	$\tan 67^\circ = \frac{12.586}{x}$ $2.3559 = \frac{12.586}{x}$ $x = \frac{12.586}{2.3559}$ $x = \mathbf{5.342}$
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**Total Base** = 15 + 5.342 = 20.342  
**=> Area** = 0.5 x 20.342 x 12.586 = **128.012<sup>2</sup>**