G.SRT.D.11: Law of Sines 2

1 In $\triangle ABC$, $a = 19$, $c = 10$, and $m\angle A = 111$. Which statement can be used to find the value of $m\angle C$?
1) $\sin C = \frac{10}{19}$ 2) $\sin C = \frac{19\sin 69°}{10}$
3) $\sin C = \frac{10\sin 21°}{19}$ 4) $\sin C = \frac{10\sin 69°}{19}$

2 If $a = 4$, $b = 6$, and $\sin A = \frac{3}{5}$ in $\triangle ABC$, then $\sin B$ equals
1) $\frac{3}{20}$ 2) $\frac{6}{10}$ 3) $\frac{8}{10}$ 4) $\frac{9}{10}$

3 In $\triangle ABC$, $\sin A = 0.6$, $a = 10$, and $b = 7$. Find $\sin B$.

4 In $\triangle ABC$, $a = 6$, $b = 9$, and $\sin A = \frac{2}{3}$. Find $\sin B$.

5 In $\triangle ABC$, $b = 12$, $c = 8$, and $\sin B = \frac{1}{2}$. Find the value of $\sin C$.

6 In $\triangle ABC$, $\sin A = 0.25$, $a = 5$, and $b = 10$. Find the value of $\sin B$.

7 In $\triangle ABC$, $a = 10$, $b = 8$, and $\sin B = \frac{3}{4}$. Find $\sin A$.

8 In $\triangle ABC$, $a = 5$, $b = 7$, and $\sin A = \frac{3}{7}$. What is $\sin B$?

9 In $\triangle ABC$, $a = 5$, $\sin A = \frac{1}{5}$, and $b = 4$. Find $\sin B$.

10 In $\triangle ABC$, $b = 6$, $c = 3$, and $\sin B = 0.4$. Find the value of $\sin C$.

11 In $\triangle ABC$, $a = 15$, $c = 10$, and $\sin A = 0.45$. Find $\sin C$.

12 In $\triangle ABC$, $a = 5$, $b = 6$, and $\sin B = \frac{3}{5}$. Find the number of degrees in acute angle A.

13 In triangle ABC, if $m\angle A = 30$, $a = 6$, and $b = 8$, then $\sin B$ is
1) $\frac{2}{3}$ 2) $\frac{3}{4}$ 3) $\frac{6}{10}$ 4) $\frac{8}{10}$

14 In $\triangle ABC$, $m\angle A = 30$, $b = 14$, and $a = 10$. Find $\sin B$.

15 In $\triangle ABC$, $m\angle A = 30$, $a = 8$, and $b = 12$. Find $\sin B$.

16 In $\triangle ABC$, $a = 6$, $b = 7$, and $m\angle B = 30$. Find $\sin A$.

17 In $\triangle ABC$, side $a = 3$, side $c = 3\sqrt{2}$, and $m\angle A = 45$. Find $m\angle C$.

18 In $\triangle ABC$, $m\angle A = 30$, $a = 12$, and $b = 10$. Which type of triangle is $\triangle ABC$?
1) acute 2) isosceles 3) obtuse 4) right

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Answer Section

1 ANS: 4

$\frac{19}{\sin 111} = \frac{10}{\sin C}$

$\sin C = \frac{10 \sin 111}{19}$. 111° is a Quadrant II angle with a reference angle of 69° in Quadrant I.

REF: 010407b

2 ANS: 4 REF: 069627siii

3 ANS:

$\frac{\sin A}{a} = \frac{\sin B}{b}$

0.42. $\frac{0.6}{10} = \frac{\sin B}{7}$

$\sin B = 0.42$

REF: 060922b

4 ANS:
1

REF: 018608siii

5 ANS:
$\frac{1}{3}$

REF: 068609siii

6 ANS:
0.5

REF: 018702siii

7 ANS:
$\frac{15}{16}$

REF: 089314siii

8 ANS:
$\frac{3}{5}$

REF: 068913siii

9 ANS:
$\frac{4}{25}$

REF: 089013siii

10 ANS:
0.2

REF: 019802siii

11 ANS:
0.3

REF: 089804siii

12 ANS:
30

REF: 068818siii

13 ANS: 1 REF: 068726siii

14 ANS:
0.7

REF: 019015siii

15 ANS:
$\frac{3}{4}$

REF: 069013siii

16 ANS:
$\frac{3}{7}$

REF: 089614siii

17 ANS:
90

REF: 010411siii

18 ANS: 3 REF: 060223siii