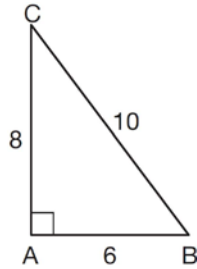


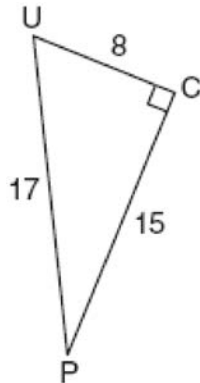
G.SRT.C.6: Trigonometric Ratios 1b

- 1 In $\triangle ABC$ below, the measure of $\angle A = 90^\circ$, $AB = 6$, $AC = 8$, and $BC = 10$.



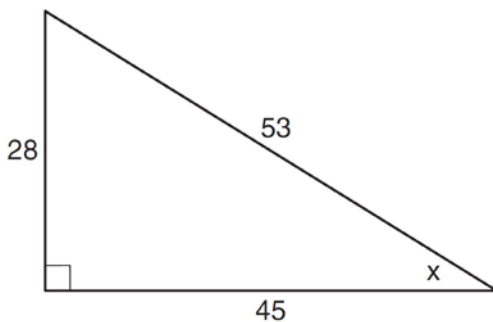
Which ratio represents the sine of $\angle B$?

- 2 The diagram below shows right triangle UPC .

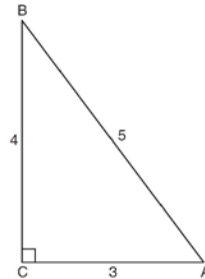


Which ratio represents the sine of $\angle U$?

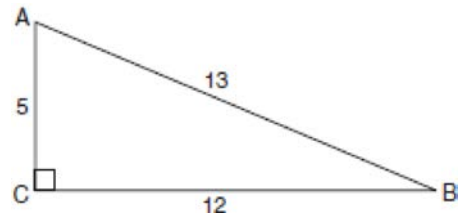
- 3 Which ratio represents $\sin x$ in the right triangle shown below?



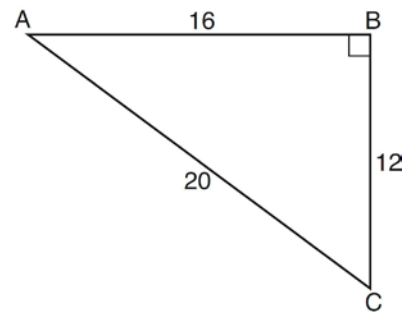
- 4 Which ratio represents the cosine of angle A in the right triangle below?



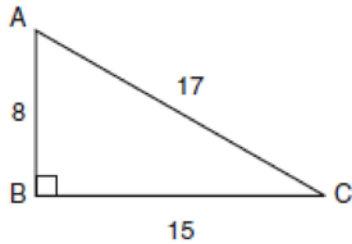
- 5 Which ratio represents $\cos A$ in the accompanying diagram of $\triangle ABC$?



- 6 In right triangle ABC shown below, what is the value of $\cos A$?

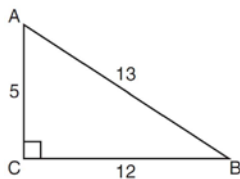


- 7 In the accompanying diagram of right triangle ABC , $AB = 8$, $BC = 15$, $AC = 17$, and $m\angle ABC = 90^\circ$.



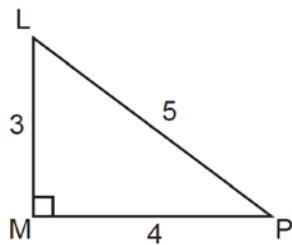
What is $\tan \angle C$?

- 8 The diagram below shows right triangle ABC .



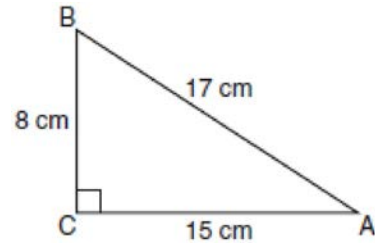
Which ratio represents the tangent of $\angle ABC$?

- 9 The diagram below shows right triangle LMP .



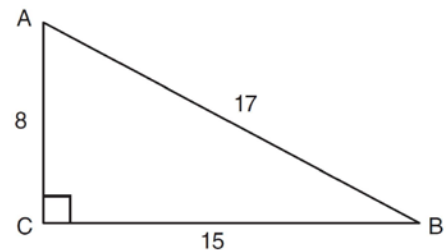
Which ratio represents the tangent of $\angle PLM$?

- 10 Which equation shows a correct trigonometric ratio for angle A in the right triangle below?



- 1) $\sin A = \frac{15}{17}$
- 2) $\tan A = \frac{8}{17}$
- 3) $\cos A = \frac{15}{17}$
- 4) $\tan A = \frac{5}{8}$

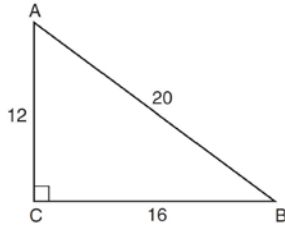
- 11 Right triangle ABC has legs of 8 and 15 and a hypotenuse of 17, as shown in the diagram below.



The value of the tangent of $\angle B$ is

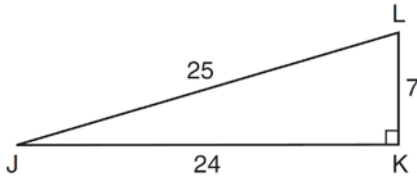
- 12 In triangle MCT , the measure of $\angle T = 90^\circ$, $MC = 85$ cm, $CT = 84$ cm, and $TM = 13$ cm. Which ratio represents the sine of $\angle C$?
- 13 In $\triangle ABC$, the measure of $\angle B = 90^\circ$, $AC = 50$, $AB = 48$, and $BC = 14$. Which ratio represents the tangent of $\angle A$?

- 14 In right triangle ABC shown below, $AC = 12$, $BC = 16$, and $AB = 20$.



Which equation is *not* correct?

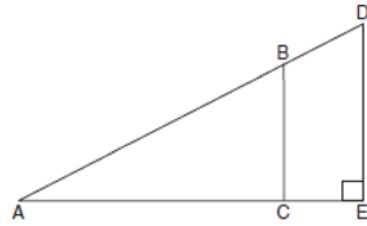
- 1) $\cos A = \frac{12}{20}$
 - 2) $\tan A = \frac{16}{12}$
 - 3) $\sin B = \frac{12}{20}$
 - 4) $\tan B = \frac{16}{20}$
- 15 In right triangle JKL in the diagram below, $KL = 7$, $JK = 24$, $JL = 25$, and $\angle K = 90^\circ$.



Which statement is *not* true?

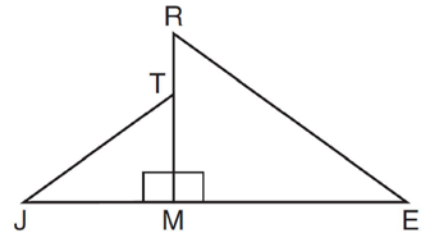
- 1) $\tan L = \frac{24}{7}$
 - 2) $\cos L = \frac{24}{25}$
 - 3) $\tan J = \frac{7}{24}$
 - 4) $\sin J = \frac{7}{25}$
- 16 In $\triangle ABC$, $m\angle C = 90$. If $AB = 5$ and $AC = 4$, which statement is *not* true?
- 1) $\cos A = \frac{4}{5}$
 - 2) $\tan A = \frac{3}{4}$
 - 3) $\sin B = \frac{4}{5}$
 - 4) $\tan B = \frac{5}{3}$

- 17 In the diagram of right triangle ADE below, $\overline{BC} \parallel \overline{DE}$.



Which ratio is always equivalent to the sine of $\angle A$?

- 1) $\frac{AD}{DE}$
 - 2) $\frac{AE}{AD}$
 - 3) $\frac{BC}{AB}$
 - 4) $\frac{AB}{AC}$
- 18 In the diagram below, $\triangle ERM \sim \triangle JTM$.



Which statement is always true?

- 1) $\cos J = \frac{RM}{RE}$
- 2) $\cos R = \frac{JM}{JT}$
- 3) $\tan T = \frac{RM}{EM}$
- 4) $\tan E = \frac{TM}{JM}$

G.SRT.C.6: Trigonometric Ratios 1b
Answer Section

1 ANS:

$$\frac{8}{10}$$

$$\sin B = \frac{\text{opposite}}{\text{hypotenuse}} = \frac{8}{10}$$

REF: 011518ia

2 ANS:

$$\frac{15}{17}$$

$$\sin U = \frac{\text{opposite}}{\text{hypotenuse}} = \frac{15}{17}$$

REF: 010919ia

3 ANS:

$$\frac{28}{53}$$

$$\sin x = \frac{\text{opposite}}{\text{hypotenuse}} = \frac{28}{53}$$

REF: 011109ia

4 ANS:

$$\frac{3}{5}$$

$$\cos A = \frac{\text{adjacent}}{\text{hypotenuse}} = \frac{3}{5}$$

REF: 081329ia

5 ANS:

$$\frac{5}{13}$$

$$\cos A = \frac{\text{adjacent}}{\text{hypotenuse}} = \frac{5}{13}$$

REF: 080414a

6 ANS:

$$\frac{16}{20}$$

$$\cos x = \frac{\text{adjacent}}{\text{hypotenuse}} = \frac{16}{20}$$

REF: 011307ia

7 ANS:

$$\frac{8}{15}$$

$$\tan C = \frac{\text{opposite}}{\text{adjacent}} = \frac{8}{15}$$

REF: 010316a

8 ANS:

$$\frac{5}{12}$$

$$\tan ABC = \frac{\text{opposite}}{\text{adjacent}} = \frac{5}{12}$$

REF: 081112ia

9 ANS:

$$\frac{4}{3}$$

$$\tan PLM = \frac{\text{opposite}}{\text{adjacent}} = \frac{4}{3}$$

REF: 011226ia

10 ANS: 3

$$\cos A = \frac{\text{adjacent}}{\text{hypotenuse}} = \frac{15}{17}$$

REF: 011008ia

11 ANS:

0.5333

$$\tan B = \frac{\text{opposite}}{\text{adjacent}} = \frac{8}{15} = 0.5\bar{3}$$

REF: 081026ia

12 ANS:

$$\frac{13}{85}$$

$$\sin C = \frac{\text{opposite}}{\text{hypotenuse}} = \frac{13}{85}$$

REF: fall0721ia

13 ANS:

$$\frac{14}{48}$$

$$\tan A = \frac{\text{opposite}}{\text{adjacent}} = \frac{14}{48}$$

REF: 061009ia

14 ANS: 4 REF: 061417ia

15 ANS: 2 REF: 081418ia

16 ANS: 4

If $m\angle C = 90$, then \overline{AB} is the hypotenuse, and the triangle is a 3-4-5 triangle.

REF: 061224ia

17 ANS: 3 REF: 011714geo

18 ANS: 4 REF: 061615geo