Unit 4: Trigonometry Final Review Assignment

Final Review Assignment

This assignment includes multiple choice and short answer questions. For multiple choice questions, select the best answer. Each is worth 1 mark. Marks assigned to short answer questions are indicated for each question. Be sure to show all necessary work.

(1) _____ 1. What is the reference angle for 220° in standard position?

A. 40°
B. 50°
C. 140°
D. 220°

(1) _____ 2. Which of the following angles does **not** have a reference angle of 10°?

A. 10°
B. 80°
C. 170°
D. 190°

(1) _____ 3. The point (–8, 15) is on the terminal arm of θ, an angle in standard position. Which primary trigonometric ratio is correct?

A. $\cos\theta = -\frac{17}{8}$
B. $\cos\theta = \frac{15}{17}$
C. $\sin\theta = -\frac{8}{17}$
D. $\sin\theta = \frac{15}{17}$

(1) _____ 4. What is the exact value of $\tan 240°$?

A. $\frac{\sqrt{3}}{3}$

B. $\sqrt{3}$

C. $-\sqrt{3}$

D. $-\frac{\sqrt{3}}{3}$

(1) _____ 5. An angle is in standard position, such that $\sin\theta = -\frac{5}{7}$. What are the possible values of θ, to the nearest degree, if $0° \leq \theta < 360°$?

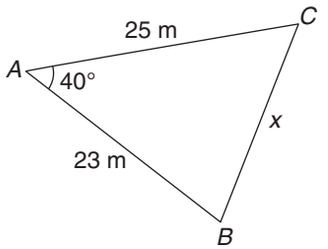
A. 46° and 134°

B. 46° and 226°

C. 134° and 314°

D. 226° and 314°

(1) _____ 6. Determine the length of side x. Round to the nearest tenth of a metre.



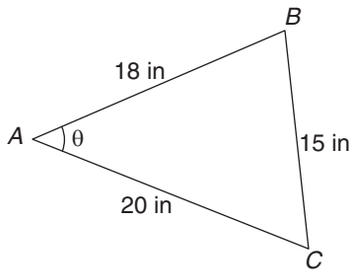
A. 16.5 m

B. 20.2 m

C. 28.0 m

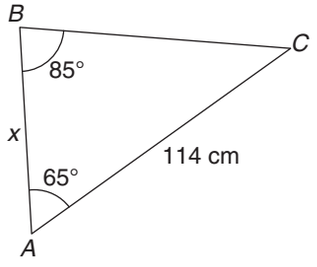
D. 31.3 m

(1) _____ 7. Determine the measure of angle θ. Round to the nearest tenth of a degree.



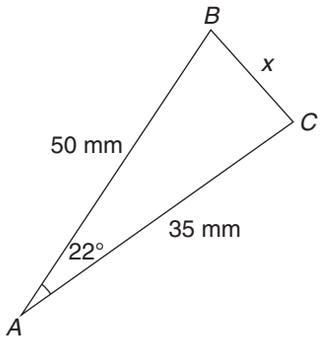
A. 11.6°
B. 43.9°
C. 46.1°
D. 59.9°

(1) _____ 8. Determine the length of side *x*. Round to the nearest tenth of a centimetre.



A. 57.2 cm
B. 62.9 cm
C. 103.7 cm
D. 125.3 cm

(1) _____ 9. To solve for x in the triangle below, which strategy would be **best**?



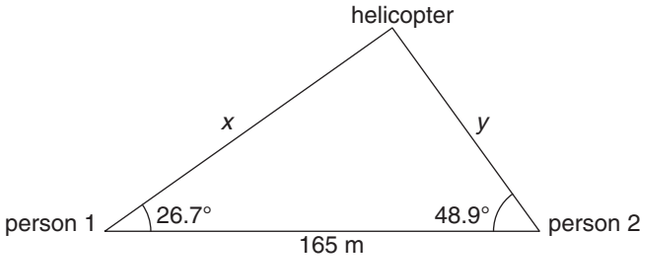
A. The cosine law
B. The sine law
C. The primary trigonometric ratios
D. Either the cosine law or the sine law.

10. In $\triangle ABC$, $c = 10$ cm, $b = 8$ cm, and $\angle B = 35^\circ$.

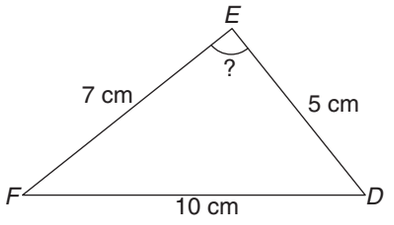
(1) a. Sketch a digram of the two possible triangles.

③ b. Solve the triangles.

(3) 11. A rescue helicopter locates two people caught in an avalanche. The angle of elevation from the first person to the helicopter is 26.7°, and the angle of elevation from the second person to the helicopter is 48.9°. If the distance between the two people is 165 m, determine how far both people are from the helicopter. Round to the nearest metre.



(2) 12. A drive belt wraps around three pulleys, D, E, and F. The distance between pulleys D and E is 5 cm, the distance between pulleys E and F is 7 cm, and the distance between pulleys D and F is 10 cm. Determine the angle of the belt at pulley E. Round to the nearest tenth of a degree.



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