MEMORANDUM

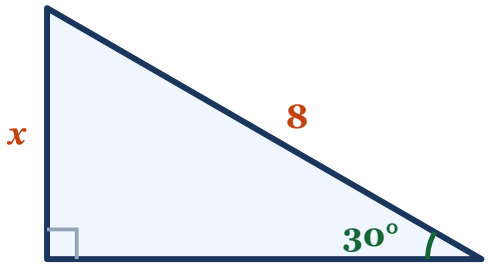
Name: ..... Class: .....

Date: .....

MARK ____ / 21

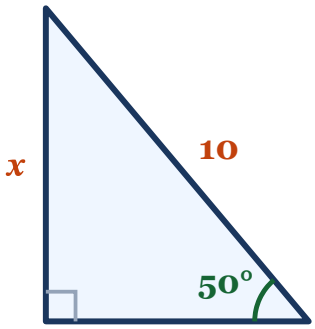
Answer all questions. Show all your working — marks are awarded for method as well as the final answer. **Teacher copy: accept any correct equivalent method.**

1 Find x opposite a $30°$ angle, hypotenuse 8. *(sine)* (2)



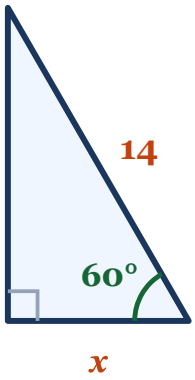
$x = 8 \sin 30° = 8 \times 0{,}5 = \mathbf{4}$ ✓✓ (2)

2 Find x opposite a $50°$ angle, hypotenuse 10. *(sine)* (2)



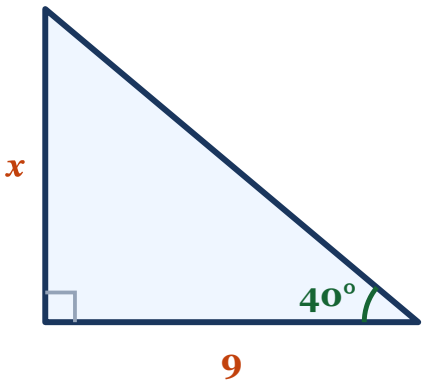
$10 \sin 50° \approx \mathbf{7{,}66}$ ✓✓ (2)

3 Find x adjacent to a $60°$ angle, hypotenuse 14. *(cosine)* (2)



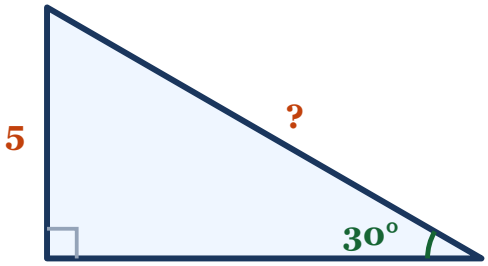
$14 \cos 60° = 14 \times 0{,}5 = \mathbf{7}$ ✓✓ (2)

4 Find x opposite a $40°$ angle, adjacent 9. *(tangent)* (2)



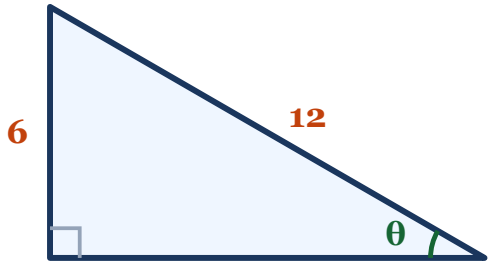
$9 \tan 40° \approx \mathbf{7{,}55}$ ✓✓ (2)

5 The side opposite a $30°$ angle is 5. Find the hypotenuse. *(hypotenuse)* (2)



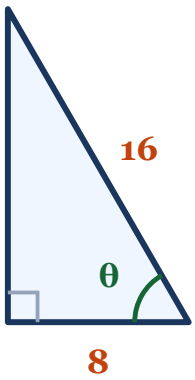
$h = \dfrac{5}{\sin 30°} = \mathbf{10}$ ✓✓ (2)

6 opposite = 6, hypotenuse = 12. Find θ. *(angle)* (2)



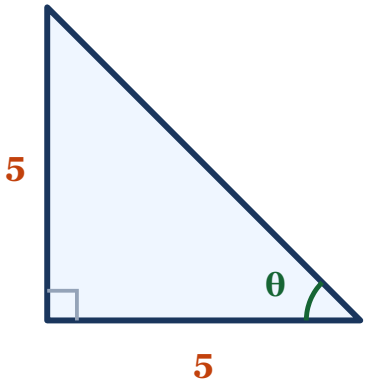
> $\sin\theta = 0{,}5 \rightarrow \theta = \mathbf{30°}$ ✓✓ (2)

7 adjacent = 8, hypotenuse = 16. Find θ. *(angle)* (2)



> $\cos\theta = 0{,}5 \rightarrow \theta = \mathbf{60°}$ ✓✓ (2)

8 opposite = 5, adjacent = 5. Find θ. *(angle)* (2)



> $\tan\theta = 1 \rightarrow \theta = \mathbf{45°}$ ✓✓ (2)

9 Give the exact value of $\sin 30°$ and $\tan 45°$. *(special)* **(2)**

> $\frac{1}{2}$ **and** 1 ✓✓ (2)

10 A rope to the top of a 6 m pole makes $40°$ with the ground. Rope length? *(application)* **(3)**

> $\sin 40° = \frac{6}{L} \rightarrow L = \frac{6}{\sin 40°} \approx$ **9,33 m** ✓✓✓ (3)

TOTAL: 21 marks

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