

Trigonometry Activity Challenge Colouring Page

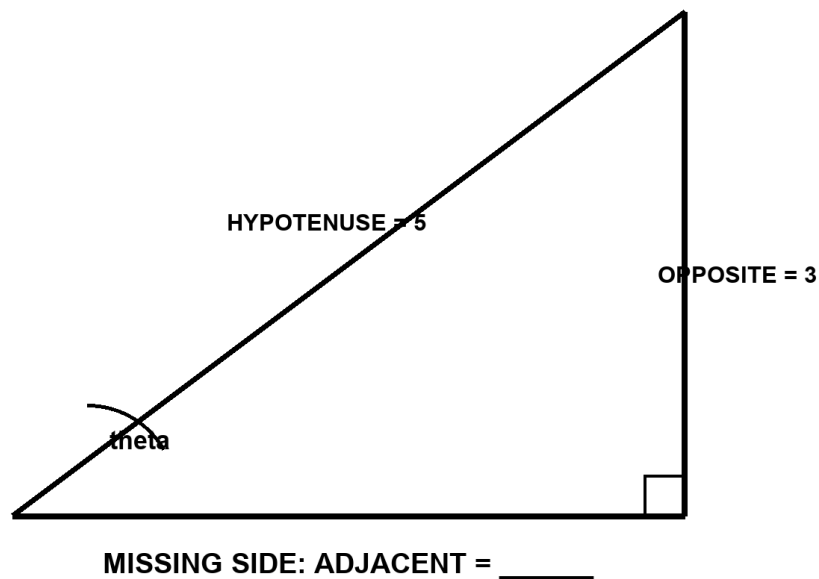
KS4 / GCSE / Year 10 - Mathematics

Complete the missing adjacent side in the 3-4-5 triangle and verify sine, cosine and tangent.

RIGHT-ANGLED TRIGONOMETRY

Complete the missing adjacent side and verify all three ratios

3-4-5 TRIANGLE



SOH - CAH - TOA

SINE

opposite / hypotenuse

$$\sin(\theta) = 3/5$$

COSINE

adjacent / hypotenuse

$$\cos(\theta) = 4/5$$

TANGENT

opposite / adjacent

$$\tan(\theta) = 3/4$$

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Complete the missing adjacent side in the 3-4-5 triangle and verify sine, cosine and tangent.

Parent & Teacher Guidance

Curriculum focus

Topic: Trigonometry. Develop accurate observation, subject vocabulary and evidence-based explanation. Mapped scope: DfE GCSE subject content and key stage 4 curriculum entitlement.

Before you begin

Review the picture together and ask the learner what they already notice about Trigonometry. Read the activity aloud, explain unfamiliar vocabulary, and agree which details need special attention.

Solo activity

The learner can complete the colouring independently, then use the finished page to explain three details linked to Trigonometry. Encourage accurate colour choices where they carry meaning, but allow creative choices elsewhere.

Group activity

Give pairs or small groups different areas to inspect. Ask them to agree on evidence before colouring, compare their findings, and present one curriculum fact to the class. Finish with a whole-group check against the guidance below.

Questions to guide discussion

What evidence can you see? Which feature is most important and why? How does one part connect to another? What new fact about Trigonometry can you explain using the picture?

Answers and checking

The adjacent side is 4. Relative to theta, opposite=3 and hypotenuse=5, so $\sin(\theta)=3/5$, $\cos(\theta)=4/5$ and $\tan(\theta)=3/4$.

Learning record and next steps

☐ Completed the colouring

☐ Explained key vocabulary

☐ Completed the activity

☐ Used visible evidence

Evidence noticed / vocabulary used

Next step:
