

Build Tasks — Answers



1. Judge the strength (weak/moderate/strong) of this relationship, ignoring the outlier.



Solution

Strong – the 5 main points lie on a line

2. Identify the outlier's coordinates. By how much does it exceed the line's prediction at that height?



Solution

(155, 44), predicted 37.
Exceeds by 7

3. Predict the shoe size at 175 cm. Is this interpolation or extrapolation?



Solution

Size = $0.2(175) + 6 = 41$.
Interpolation (within 150-180)

4. Predict the shoe size at 195 cm. Why might this prediction be unreliable?



Solution

Size = $0.2(195) + 6 = 45$.
Extrapolation – beyond 180cm

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5. What does the key tell you about the grouping shown here?



Solution

Circles = Class A,
squares
= Class B – two groups
plotted together

6. Which class shows the stronger association between sleep and score? Justify your answer.



Solution

Class A – its points sit
exactly on a line; Class B
is scattered

7. Estimate Class A's test score for 6.5 hours of sleep, using their trend.



Solution

Score = $8(6.5) + 18 = 70$

8. Explain why one combined line of best fit through both classes would be misleading.



Solution

Their trends differ –
one line hides both