

Integrated projects — solutions

Coordinate area, length, volume, rates and decisions from one model.



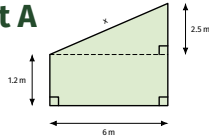
Name _____

Date _____

Checking

Each solution uses the same diagram and question position as the student worksheet. Money is rounded to the nearest cent only at the end.

Project A



Depth 5 m; rates as on worksheet.

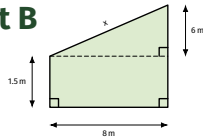
1. Solution 7.2, 7.5, total 14.7 m².

2. Solution $s = 6.5$ m; $V = 73.5$ m³.

3. Solution $1550 + 468.75 + 968.75 + 16\,170 = \$19\,157.50$.

Questions 1–3

Project B



Depth 4 m; rates as on worksheet.

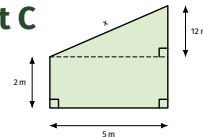
4. Solution $12 + 24 = 36$ m².

5. Solution $s = 10$ m; $V = 144$ m³.

6. Solution $1820 + 1680 + 1170 + 29\,520 = \$34\,190$.

Questions 4–6

Project C



Depth 3.5 m; rates as on worksheet.

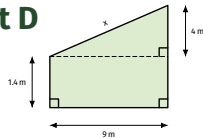
7. Solution $10 + 30 = 40$ m².

8. Solution $s = 13$ m; $V = 140$ m³.

9. Solution $2000 + 1650 + 1440 + 32\,200 = \$37\,290$.

Questions 7–9

Project D



Depth 4.5 m; rates as on worksheet.

10. Solution $12.6 + 18 = 30.6$ m².

11. Solution $s = \sqrt{97} = 9.8489\dots$ m; $V = 137.7$ m³.

12. Solution $1321.92 + 2206.80 + 1394.82 + 29\,605.50 = \$34\,529.04$.

Questions 10–12

Integrated projects — solutions

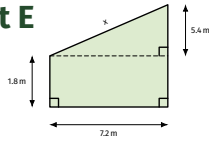
Compare options, respect purchase rules, and test assumptions.



Name _____

Date _____

Project E



Depth 3.8 m; rates as on worksheet.

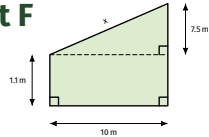
13. Solution $12.96 + 19.44 = 32.4 \text{ m}^2$.

14. Solution $s = 9 \text{ m}$; $V = 123.12 \text{ m}^3$.

15. Solution $2306.45 + 1244.16 + 1279.80 + 27\,702 = \$32\,532.41$.

Questions 13–15

Project F



Depth 5.2 m; rates as on worksheet.

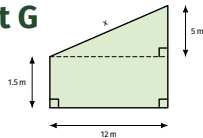
16. Solution $A = 48.5 \text{ m}^2$; $s = 12.5 \text{ m}$; $V = 252.2 \text{ m}^3$.

17. Solution $252.2/6 = 42.03 \dots \Rightarrow 43 \text{ loads}$; \$56 760.

18. Solution $56\,760 + 4480 + 1620 = \$62\,860$; round up to buy enough.

Questions 16–18

Project G



Depth 4 m; rates as on worksheet.

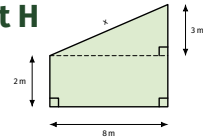
19. Solution $A = 48 \text{ m}^2$; $s = 13 \text{ m}$; $V = 192 \text{ m}^3$.

20. Solution A = \$48 521; B = \$49 125.

21. Solution Choose A; it is \$604 cheaper.

Questions 19–21

Project H



Depth 6 m; rates as on worksheet.

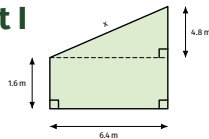
22. Solution $A = 28 \text{ m}^2$; $s = \sqrt{73} \text{ m}$; $V = 168 \text{ m}^3$.

23. Solution $2660 + 864 + 1356.63 + 40\,924.80 = \$45\,805.43$.

24. Solution \$805.43 over; retain full precision until the final total.

Questions 22–24

Project I



Depth 5 m; rates as on worksheet.

25. Solution $10.24 + 15.36 = 25.6 \text{ m}^2$; $s = 8 \text{ m}$; $V = 128 \text{ m}^3$.

26. Solution $1935.72 + 1059.84 + 1094.40 + 28\,672 = \$32\,761.96$.

27. Solution Add $1310.72 + 1059.84$: \$35 132.52. Original model priced one visible side only.

Questions 25–27