

6J / Classroom answers

Teacher copy. Accept equivalent exact forms and valid alternative reasoning.

1. Find a direct model

$k = 2.2$; $M = 2.2V$.

- $k = \frac{9.9}{4.5} = 2.2$.
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2. Reverse a direct model

15 L.

- $33 = 2.2V$ gives $V = \frac{33}{2.2} = 15$.
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3. Read a proportional graph

\$2.50 per metre; $C = 2.5L$.

- $k = \frac{10}{4} = 2.5$; the line passes through the origin.
-

4. Use a graph model

12 m.

- $30 = 2.5L$ gives $L = 12$; this agrees with the graph.
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5. Distinguish a fixed charge

Service A; its straight line passes through the origin. B has a \$6 fixed charge.

- A has $C = 2n$; B has $C = 2n + 6$.
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6. Choose a feasible plan

A costs \$18 and B costs \$24. Only A fits the budget.

- $C_A = 2(9) = 18$; $C_B = 2(9) + 6 = 24$. Compare each total with \$20.
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6J / Homework answers

Teacher copy. Accept equivalent exact forms and valid alternative reasoning.

1. Find a direct model

$k = 2.4$; $M = 2.4V$.

- $k = \frac{18}{7.5} = 2.4$.
-

2. Reverse a direct model

17.5 L.

- $42 = 2.4V$ gives $V = \frac{42}{2.4} = 17.5$.
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3. Read a proportional graph

\$3.50 per metre; $C = 3.5L$.

- $k = \frac{14}{4} = 3.5$; the line passes through the origin.
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4. Use a graph model

10 m.

- $35 = 3.5L$ gives $L = 10$.
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5. Distinguish a fixed charge

A; its straight line passes through the origin. B has a \$9 fixed charge.

- A has $C = 3n$; B has $C = 3n + 9$.
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6. Choose a feasible plan

A costs \$21 and B costs \$30. Only A fits the budget.

- $C_A = 3(7) = 21$; $C_B = 3(7) + 9 = 30$. Compare each total with \$24.
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