8.5 Applying Integer Operations

Jessie, Landon and Christian were discussing the following problem.
A submersible dives from the surface at $15 \mathrm{~m} / \mathrm{min}$ for 6 minutes and then at $25 \mathrm{~m} / \mathrm{min}$ for 20 minutes. What is the depth of the submersible after the dive?

They worked together to write the following expression to solve the problem:

$$
6 \times(-15)+20 \times(-25)
$$

They each got a different answer.
Jessie got +1750
Landon got -590
Christian got -750

$$
\begin{aligned}
& \text { wing expression to solve the problem: } \\
& \begin{array}{l}
6 \times(-15)+20 \times(-25) \\
=-90+(-500) \\
=-590
\end{array} \\
& \text { Landon got it wight! }
\end{aligned}
$$

Who's right?

$$
\text { a) } \begin{aligned}
& (-15) \times(-3)-(+4) \times(-2)^{2} \\
= & +5-4 \times 4 \\
= & 5-16 \\
= & -11
\end{aligned}
$$

b

$$
\begin{aligned}
& 6=6)=(-24) \div(2) \\
& -6-(-24) \div(-12) \\
& -6-(2) \\
& -6+12) \\
& =6
\end{aligned}
$$

$$
\begin{aligned}
& -8-24 \\
& =-32
\end{aligned}
$$

One week in March in Peguis, Manitoba, the daily high temperatures were $-2^{\circ} \mathrm{C}$, $-6^{\circ} \mathrm{C},+1^{\circ} \mathrm{C},+2^{\circ} \mathrm{C},-5^{\circ} \mathrm{C},-8^{\circ} \mathrm{C}$ and $+4^{\circ} \mathrm{C}$.
What was the mean daily high temperature?


