

INTEGERS 1

Write down the answers to the following expressions:

a) $-3[4 - (-5) \cdot (-3)] + (-2)^2$	b) $-4 + 5 - (-2) \cdot [4 + (-3)]$	c) $(-5) \cdot 3 + 4 \cdot [-3 \cdot (-2 + 1)]$
d) $(-2)^3 - \frac{4 - 2 \cdot (-3)}{2}$	e) $\frac{(-4) \cdot [-3 + 2 \cdot (-2)]}{-14}$	f) $\frac{(-4) - 3 \cdot (-2)}{7 - 4 \cdot 2}$
g) $\frac{-2^3 + (-2)^2 - 2 \cdot 5}{-2 \cdot 3 - (-1)^6}$	h) $2 - 2 \cdot [(-5)^2 \cdot 3 - 4 \cdot (-3 + 6)]$	i) $[-7^2 + (-3)^2] \div (-2)^3 + 1$
j) $-[4 - (-1) \cdot (-3 + 10) - (-2)^3]$	k) $(-3 + 1)^2 - 4 \div 2 + 2 \cdot 3$	l) $\frac{2 - 3 \cdot (-1 - 3)}{-2 \cdot 5 + 3 - (-5)}$

SOLUTION

<p>a)</p> $\begin{aligned} & -3[4 - (-5) \cdot (-3)] + (-2)^2 = \\ & = -3 \cdot [4 - 15] + 4 = \\ & = -3 \cdot (-11) + 4 = \\ & = 33 + 4 = 37 \end{aligned}$	<p>b)</p> $\begin{aligned} & -4 + 5 - (-2) \cdot [4 + (-3)] = \\ & = -4 + 5 + 2 \cdot [1] = \\ & = -4 + 5 + 2 = 3 \end{aligned}$	<p>c)</p> $\begin{aligned} & (-5) \cdot 3 + 4 \cdot [-3 \cdot (-2 + 1)] = \\ & = -15 + 4 \cdot [-3 \cdot (-1)] = \\ & = -15 + 4 \cdot 3 = -15 + 12 = -3 \end{aligned}$
<p>d)</p> $\begin{aligned} & (-2)^3 - \frac{4 - 2 \cdot (-3)}{2} = \\ & = -8 - \frac{4 + 6}{2} = -8 - \frac{10}{2} = \\ & = -8 - 5 = -13 \end{aligned}$	<p>e)</p> $\begin{aligned} & \frac{(-4) \cdot [-3 + 2 \cdot (-2)]}{-14} = \\ & = \frac{(-4) \cdot [-3 - 4]}{-14} = \\ & = \frac{(-4) \cdot (-7)}{14} = 2 \end{aligned}$	<p>f)</p> $\begin{aligned} & \frac{(-4) - 3 \cdot (-2)}{7 - 4 \cdot 2} = \\ & = \frac{-4 + 6}{7 - 8} = \frac{2}{-1} = -2 \end{aligned}$
<p>g)</p> $\begin{aligned} & \frac{-2^3 + (-2)^2 - 2 \cdot 5}{-2 \cdot 3 - (-1)^6} = \\ & = \frac{-8 + 4 - 10}{-6 - (+1)} = \frac{4 - 18}{-6 - 1} = \\ & = \frac{-14}{-7} = 2 \end{aligned}$	<p>h)</p> $\begin{aligned} & 2 - 2 \cdot [(-5)^2 \cdot 3 - 4 \cdot (-3 + 6)] = \\ & = 2 - 2 \cdot [25 \cdot 3 - 4 \cdot 3] = \\ & = 2 - 2 \cdot [75 - 12] = \\ & = 2 - 2 \cdot 63 = 2 - 126 = -124 \end{aligned}$	<p>i)</p> $\begin{aligned} & [-7^2 + (-3)^2] \div (-2)^3 + 1 = \\ & = [-49 + 9] \div 8 + 1 = \\ & = (-40) \div 8 + 1 = -5 + 1 = -4 \end{aligned}$
<p>j)</p> $\begin{aligned} & -[4 - (-1) \cdot (-3 + 10) - (-2)^3] = \\ & = -[4 - (-1) \cdot 7 + 8] = \\ & = -[4 + 7 + 8] = -19 \end{aligned}$	<p>k)</p> $\begin{aligned} & (-3 + 1)^2 - 4 \div 2 + 2 \cdot 3 = \\ & = (-2)^2 - 2 + 6 = \\ & = 4 - 2 + 6 = 8 \end{aligned}$	<p>l)</p> $\begin{aligned} & \frac{2 - 3 \cdot (-1 - 3)}{-2 \cdot 5 + 3 - (-5)} = \\ & = \frac{2 - 3 \cdot (-4)}{-10 + 3 + 5} = \\ & = \frac{2 + 12}{-10 + 8} = \frac{14}{-2} = -7 \end{aligned}$