

Name: _____

Key

Hour: _____

Variables and Patterns INV 4 STUDY GUIDE

Simplify the expressions by combining like terms. IXL Y 15,16,17

$30n + 6 - 20n + 2$ $10n + 8$

$3n + 1 - 2n + n$ $2n + 1$

$3n + 7n - 3$ $10n - 3$

$(r + 5)5$ $5r + 25$

Circle the coefficients in each expression. IXL Y7

$(3)x + 11$

$(5)h - (3)h + 6$

$(8)h + 10 - (2)n + (13)h - 2$

Circle the ^{3rd} term in each expression. IXL Y7

$x + 12 - (5)b$

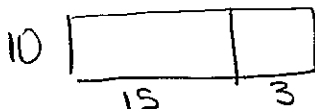
$6n - 7r + (100)$

$n + 99 - (3)r + 16t - 33$

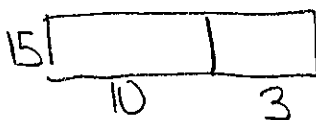
Which option (a,b,c, or d) equivalent expressions for the area of the figure? IXL Y11,12

100 class Drawing

a.) $10(15 + 3)$ and $(10 \times 15) + (10 \times 3)$



c.) $15(10 + 3)$ and $(15 \times 10) + (15 \times 3)$



b.) $3(15 + 10)$ and $3 + 15 + 3 + 10$

d.) $10(10 + 15)$ and $10 + 10 + 10 + 15$

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Solve each of the following. Select which is equivalent to $(5 \times 4) + (5 \times n)$

IXL Y11,12

a.) $n(5 + 4)$

b.) $5(4 + n)$ $5(4) + 5(n)$

c.) $4(n+5)$

d.) $n(4 + 5)$

Simplify $3(n+5)$ $3n+15$

Select ALL that are equivalent. **IXL Y11, 15**

★ $3(n+4)+3$ $3n+12+3 = 3n+15$

• ~~$3n+10$~~

• ~~$3n+5$~~

• $3n+(5)+n+(5)$

$4n+10$

What is the value of $4n + a^2 - 2t$, when $n=2$, $a=1$, and $t = 3$?

SHOW ALL WORK IXL Y5

$$4(2) + 1^2 - 2(3)$$

$$8 + 1 - 6$$

$$9 - 6$$

$$(3)$$

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Yellow Jacket Challenge Costs of Operation

Greenville Yellow Jacket Challenge	Operating Costs
After Race Snacks & Water	\$1.00 per person <i>1n</i>
Race T-Shirt	\$11 per person <i>11n</i>
Timers, tables, advertisement	\$200 <i>200</i>

Circle the equation(s) that can represent the total cost **C** for number of people **n**.

$C = 11n + 1n + 200$

$C = 1 + 11n + 200$

$C = 1n + 11 + 200n$

$C = 12n + 200$

Solve for the unknown in the following equations: IXL Znew, 6, 9, 10

$$\begin{array}{r} 34 = x - 2 \\ +2 \quad +2 \\ \hline 36 = x \end{array}$$

$$\begin{array}{r} 2x - 10 = 22 \\ +10 \quad +10 \\ \hline 2x = 32 \\ \frac{2x}{2} = \frac{32}{2} \end{array}$$

$x = 16$

$\frac{x}{5} = 15$

~~$\frac{5}{1} \left(\frac{x}{5} \right) = 15(5)$~~

$x = 75$

