Warm Up

Grade 7

Oct. 13

Evaluate by replacing m with 5. show work

a) 2m + 3

$2(5)+3$

$10+3$

13

b) m - 6

$5-6$

-1

c) 100 - 4m

$100-4(5)$

$100-20$

80

7. Evaluate each expression by replacing x with 4.

a) $x + 5$ b) $3x$ c) $2x - 1$

d) $\frac{x}{2}$ e) $3x + 1$ f) $20 - 2x$

a) $x+5$, $x=4$
$4+5$
9

b) $3x$, $x=4$
3×4
12

c) $2x-1$, $x=4$
$2\times4-1$
$8-1$
7

d) $\frac{x}{2}$, $x=4$
$\frac{4}{2}$
2

e) $3x+1$, $x=4$
$3\times4+1$
$12+1$
13

f) $20-2x$, $x=4$
$20-2\times4$
$20-8$
12

8. Evaluate each expression by replacing z with 7.

a) $z + 12$ b) $10 - z$ c) $5z$

d) $3z - 3$ e) $35 - 2z$ f) $3 + \frac{z}{7}$

a) $z+12$, $z=7$
$7+12$
19

b) $10-z$, $z=7$
$10-7$
3

c) $5z$, $z=7$
5×7
35

d) $3z-3$, $z=7$
$3\times7-3$
$21-3$
18

e) $35-2z$, $z=7$
$35-2\times7$
$35-14$
21

f) $3+\frac{z}{7}$, $z=7$
$3+\frac{7}{7}$
$3+1$
4

9. **Assessment Focus** Jason works at a local fish and chips restaurant.
He earns $7/h during the week, and $9/h on the weekend.

a) Jason works 8 h during the week and 12 h on the weekend.
Write an expression for his earnings.

b) Jason works x hours during the week and 5 h on the weekend.
Write an expression for his earnings.

c) Jason needs $115 to buy sports equipment.
He worked 5 h on the weekend.
How many hours does Jason have to work during the week to have the money he needs?

h = hours

a) Weekly Earnings $= 7h^{h=8}$
$= 7 \times 8$
$= 56$

Weekend Earnings $= 9h^{h=12}$
$= 9 \times 12$
$= 108$

b) Earnings $= 7x + (9 \times 5)$
$= 7x + 45$

c) Weekend Earnings 9×5
$= 45$

$115 - 45 = 70$

$7x = 70$

$x = 10$

Jason needs to work 10 more hours.

10. Take It Further A value of n is substituted in each expression to get the number in the box. Find each value of n.

a) $5n$	30	b) $3n - 1$	11
c) $4n + 7$	15	d) $5n - 4$	11
e) $4 + 6n$	40	f) $\frac{n}{8}$	5

3×4

$12 - 1 = 11$

$6 \times 6 = 36$

$n = 40$

a) $5n$ [30]

$n = 6$

b) $3n - 1$ [11]

$\_ - 1 = 11$

12

$3 \times \_ = 12$

$n = 4$

c) $4n + 7$ [15]

$8 + 7 = 15$

$4 \times 2 = 8$

$n = 2$

d) $5n - 4$ [11]

$15 - 4 = 11$

$5 \times 3 = 15$

$n = 3$

e) $4 + 6n$ [40]

$4 + 36 = 40$

$6 \times 6 = 36$

$n = 6$

f) $\frac{n}{8}$ [5]

$\frac{40}{8} = 5$

$n = 40$

Combining Like Terms

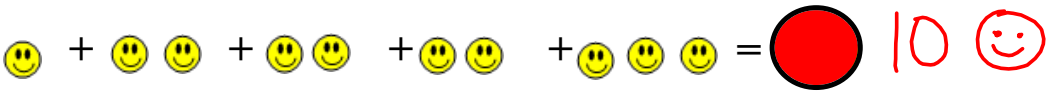
We have been using variables, which are letters. Can we add the letters? If so, when can we add or combine the variables?

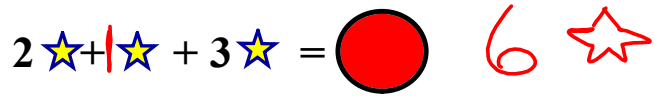
Ex) **If you bought 3 apples and 2 hamburgers at the store, could you combine these?**

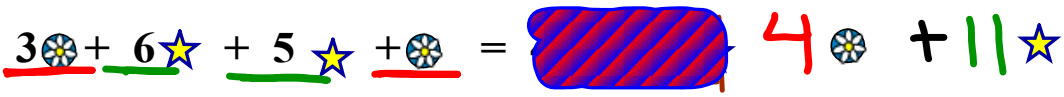
No because they are 2 different items.

Important

When combining variables, you can only combine them if they are the same. If they are the same they are called like terms.







1s + 2s + 2s + 2s + 3s = 10s

2t + t + 3t = 6t

4f + 2f + f + 2f + f = 10f

3d + 6y + 5y + d =

3d + d + 6y + 5y

4d + 11y

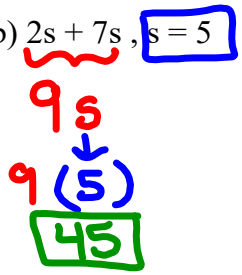
$\underbrace{2+2+2+2}_{4(2)}$

$\underbrace{m+m+m}_{3m}$

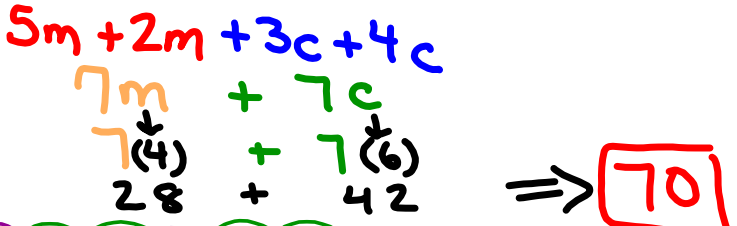
Simplify the following, then evaluate:

(a) 4b + 7b , b = 3

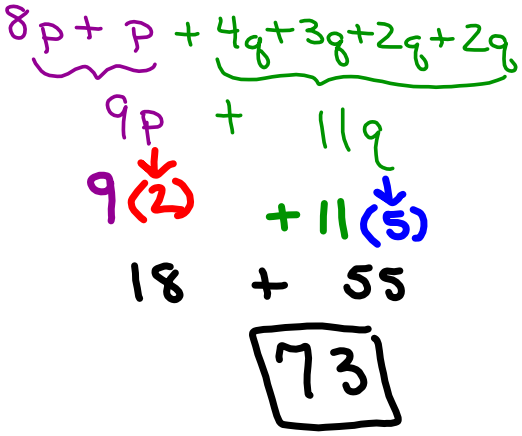
(b) 2s + 7s , s = 5



(c) 5m + 3c + 2m + 4c, m = 4 and c = 6



(d) 8p + 4q + 3q + p + 2q + 2q, p = 2 and q = 5



Homework

Combining Like Terms Worksheet 2

1 to 14

① $3x + 8x + x + x + x + 2 + 5$

$14x + 7$

② $2n + 4y + 9y + 7n$

$2n + 7n + 4y + 9y$

$27n + 13y$

Attachments

Grade 7 Unit 1 Combining Like terms WS 1 (WED. OCT2).docx