

Warm-up

-have your homework out on your desk

1. $|-50 - 12| - (-22)$

$$|-62| - (-22)$$

$$62 - (-22)$$

$$84$$

2. Translate into Algebra:

The product of a number ^x and the sum of a different ^y number and seven.

$$x(y+7)$$

Homework Check:

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- 14.** $13 + 2h$
- 15.** $5n + 6.7$
- 16.** $37t - 9.85$
- 17.** 5 more than a number q
- 18.** the quotient of y and 5
- 19.** the product of 12 and x
- 20.** the sum of 49 and m

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|-----------------|----------------|
| 25. 1728 | 26. 322 |
| 27. 4 | 28. 30 |
| 29. 1024 | 30. 512 |
| 31. 496 | 32. 0 |

Simplifying Expressions

Coefficients - The number in front of the variable

$$4xy, 5x, -10x^2, n$$

$4, 5, -10, 1$

Constant - Numbers without a variable

Example: Identify the coefficients and the constants

$$4xy + 2z + 9 - 3z - 6$$

Coefficients: 4, 2, -3

Constants: 9, -6

Term

Like terms - Terms with same variable ending

5x & 6x , 4ab & 8ab , ~~7xy & 2x²y~~
_{7xy 2xxx y}

3a,	-10a,	6b,	7ab,	8a ² b,	b
b ² ,	7ab ² ,	-9ab	5b,	4ba,	b ³

Combining Like Terms

You can only add and subtract quantities together if they have the same variable and exponent!!

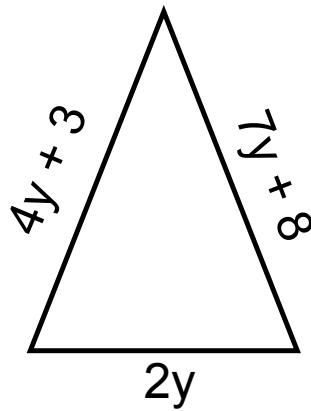
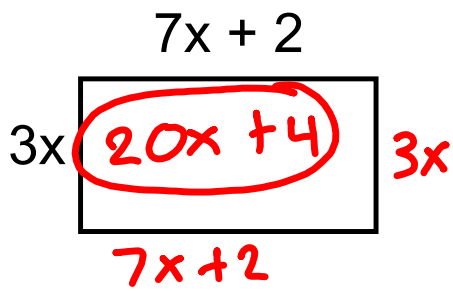
1. $5x + 3 + 7x$
 $12x + 3$

3. $4b + 7a + 2a + 8b$
 $12b + 9a$

2. $9x^2 - 8x - 10x^2 + 6x + 3$
 $-1x^2 - 2x + 3$

4. $7ab + 8a - 2b + 17ab$
 $24ab + 8a - 2b$

Find the perimeter of the shapes.



Distributive Property

1. Distribute $a(b+c) = ab + ac$

2. Simplify by combining like terms.

Examples:

1. $3(2x + 3)$

3. $3 - 7(x-4)$

2. $-5(x-5)$

4. $3x(2x - 9)$

You Try!

$$1. -3(x+2)$$
$$-3x - 6$$

$$2. -8(3z - 10)$$
$$-24z + 80$$

$$3. -5j - 1(2j + 6)$$
$$-5j - 2j - 6$$
$$-7j - 6$$

$$4. 7(x+6) - 2(2x+3)$$