

WARM-UP

1.

Solve equations according to example:

$x \div 3 = 3$ $x = 3 \times 3$ $x = 9$

Check: $9 \div 3 = 3$

$2x = 8$ $x =$

Check:

$240 - x = 180$ $x =$

Check:

$812 + x = 902$ $x =$

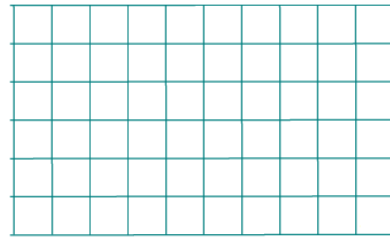
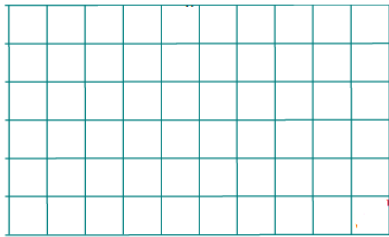
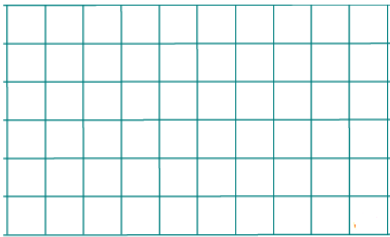
Check:

2.

$48 \div X = 8$

$53 \div Y = 7$

$W \times 9 = 72$



3.

Compare, if possible:

$2 \times c + c$ $c \times 3$

$3 \times c + 5$ $c \times 4$

$c \times 6$ $c \times 3 + c \times 2$

$x \times 5 - x \times 2$ $x \times 3$

$p + p \times 2$ $p \times 4$

$q \times 4$ $q + q + q + 7$

NEW MATERIAL

Properties of Multiplication

Commutative property of multiplication $a \times b = b \times a$

Associative Property: $(a \times b) \times c = a \times (b \times c) = a \times b \times c$

Distributive property: $a \times (b + c) = a \times b + a \times c,$

If $b > c$, then $a(b - c) = a \times b - a \times c$

There are many times in algebra when you need to simplify an expression.

The **associative, commutative, and distributive properties** of algebra are the properties most often used to simplify algebraic expressions.

4.

Collect the like items to simplify:

$$5a + 6a = \underline{\hspace{2cm}}$$

$$25 + a + b = \underline{\hspace{2cm}}$$

$$3 + 2x + 4 - x = \underline{\hspace{2cm}}$$

$$41 + 10a - 25 - 10x + 7a = \underline{\hspace{2cm}}$$

5.

Remove the parentheses and collect like terms (simplify) in each of the following:

a) $2(m+4)+3(m+6) = \underline{\hspace{2cm}}$

b) $4(t-2) - 3(t+1) = \underline{\hspace{2cm}}$

c) $7(m-3) - 2(m-4) = \underline{\hspace{2cm}}$

6.

Solve each expression using the correct order of operations

$$20 \div 4 - 3 \times 6 \div 9 + 4 \times 4 \div 8 = \underline{\hspace{10em}}$$

$$10 + 40 \div 5 \div 2 \times 3 \div 6 = \underline{\hspace{10em}}$$

$$6 \times 4 \div 8 \times 5 - 35 \div 5 + 1 \times 7 = \underline{\hspace{10em}}$$

$$4(8 + 5) - 20 = \underline{\hspace{10em}}$$

7.

Sally collected aluminum for two days. On Friday morning she collected 20 cans and Friday night she collected 25 cans. On Saturday morning Sally collected 25 cans but on Saturday night only collected 20. Did she collect more on Friday than Saturday?

8.

Volleyball uniform costs \$13 for the shirt, \$12 for pants, and \$8 for socks. Write two equivalent expressions for the total cost of 12 uniforms. Then find the cost.

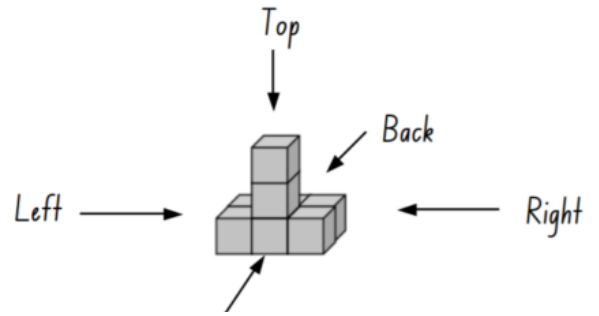
a)

b)

9.

2D projections of 3D models

a) Take a look at the solid structure build by putting together 8 identical cubes:



Front View	Top View	Right Side View	Left Side View	Back View

b) Take a look at the front, right side and top projections. Match them with 3D objects. Circle the matching 3D object.

Front View	Top View	Right Side View

Top View	Right Side View	Left Side View

c) Look at these 3D objects. Draw the 2D projections.

Front View	Top View	Right Side View

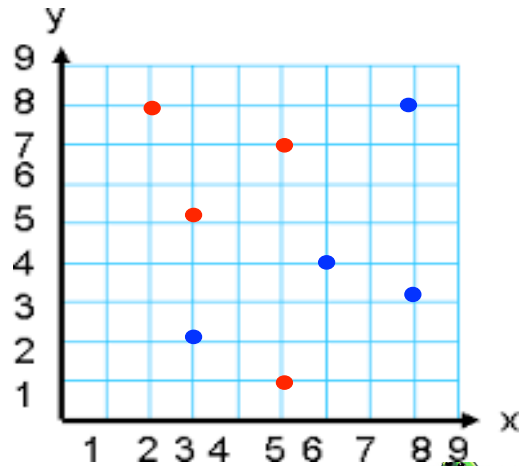
Top View	Right Side View	Left Side View

REVIEW

10.

Ben is jumping from one red dot to the next one; from the top to the bottom.
 Dina is jumping from one blue dot to the next one, from the bottom to the top.
 Write down the coordinates of each dot they jump from.

Ben: (2,8) →



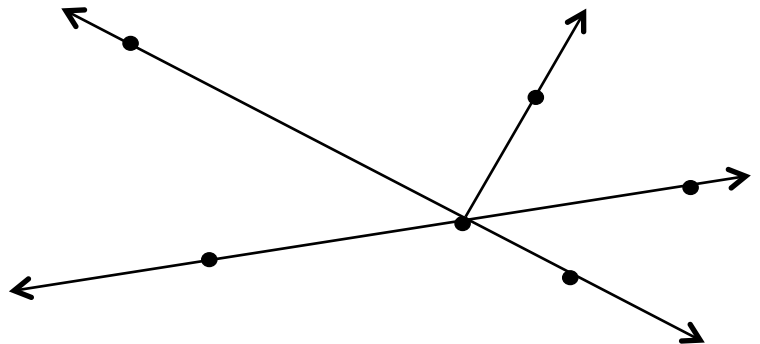
11.

Name all the points:

Name ANY three rays:

Name ANY two line segments:

Name ANY line in two ways:



12.

The length of a rectangle is equal to **a** cm and its width is **b** cm. Explain the geometric meaning of the following expressions:

$a - b$ _____

$a \times b$ _____

$a \times 2 + b \times 2$ _____

