17 The Venn Diagram depicts students liking different creatures. How many students like …

… snakes? _____

… flies? _____

… spiders AND flies? _____

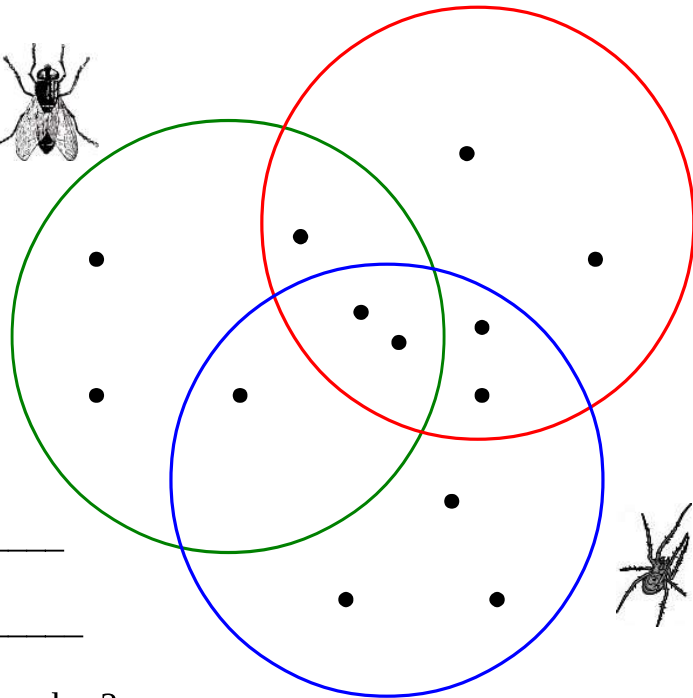… snakes OR spiders? _____

… snakes only? _____

… spiders BUT NOT snakes? _____

… BOTH flies AND spiders? _____

… BOTH flies AND spiders AND snakes? _____

18 Jake the Mouse was caught by the Cheese Factory Manager. The Factory Manager decided that he will release Jake if he can solve the problem the Manager gives him:

There are 3 boxes with a different type of cheese in each box. The boxes contain – Cheddar, Swiss and Cheddar and Swiss. Neither one of the actual labels is true.

JTM can open only one box, and take only one head of cheese from that box to be ready to identify the kind of cheese is in each box.

Which box should JTM open?

19 Mr Brown the Cat is 9 years old. The brothers are discussing the age of Mr Red.

FT: *Mr. Red is definitely older than Mr. Brown.*
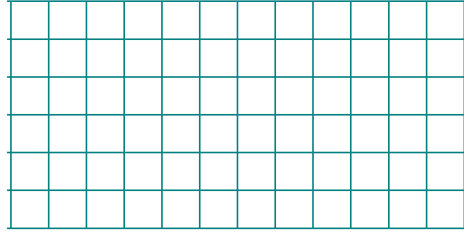
LJ: *Foxy, are you lying again?*

FT: *No, I'm not lying. I simply forgot that he's younger than Mr. Brown.*
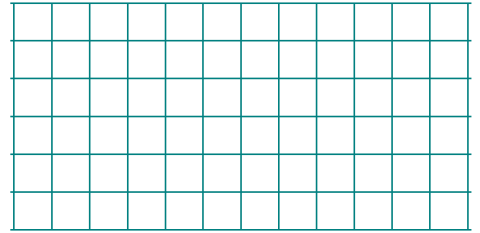
How old is Mr Red?

Lesson 13 HW

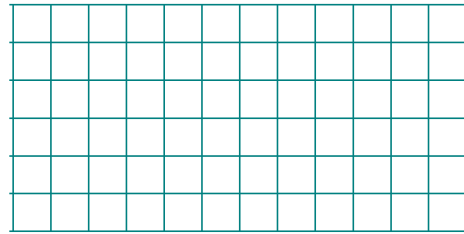**1** Write expressions to solve the word problems. Make any necessary diagrams.

There are 75 cookies laying on **w** plates. How many cookies are on 3 plates?
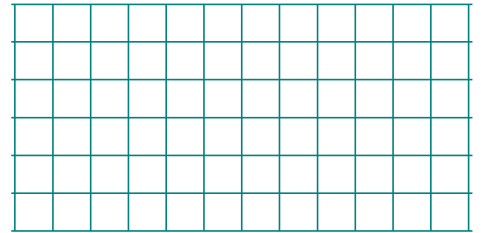
_____

_____

A train moves 80 km/h. How long does a 400 km trip take?

_____

_____

5 cans of juice cost 75 dollars. How many cans can one buy with 90 dollars?

_____

_____

In a flower green house there are 12 roses in each rose bed, 7 peonies in each peony bed, and 8 tulips in each tulip bed. There are 6 rose beds, 12 peony beds, and 9 tulip beds. How many flowers are in the green house?

_____

_____

2 Solve the equations and check your answer:

$$7y + 50 = 260$$

$$850 - 5z = 250$$

$$5x - 55 = 45$$

3 Simplify by opening parentheses:

$(12x - 60) \div 4 =$ _____ $(y + 5) \times 4 =$ _____

$5 \times (y + 18) =$ _____ $(w + 36) \div 9 =$ _____

$(3z - k) \times 2 =$ _____ $(15q + 30) \div 5 =$ _____

4 Divide with or without a remainder.

h t u	h t u	h t u	h t u
6 ⌐1 3 8	3 ⌐4 4 7	9 ⌐9 4 6	4 ⌐2 4 8

5 Find all points that are 4 cm away from point **B**, *and* 5 cm away from point **K**. Name these points $A_1, A_2, A_3, \dots$
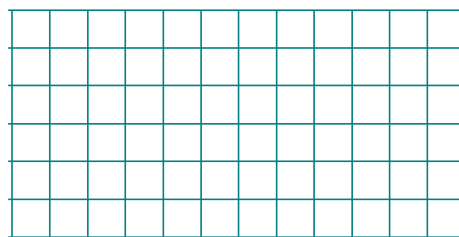
Record your algorithm below:

_____

_____

_____

_____

_____

• **B**

K •

How many points did you find? _____

6 A machine puts 8 pencils in every pencil box. How many boxes can be filled with 75 pencils?

_____

_____

7 *There are 30 red pencils and 36 green pencils. A machine puts 2 red pencils and 3 green pencils in each box. If the machine runs out of either color of pencil, it stops.*

Explain the results of the meaningful expressions, and find the meaningless ones:

Expression	Meaning
2 + 3	... the number of
36 ÷ 3	
36 ÷ 2	
30 ÷ 2	
30 ÷ 3	
30 + 36	
(30 + 36) ÷ 5	

How many boxes can be packed with pencils? _____

Which pencils will remain once packing is finished? _____ How many? _____

8 **In your notebook,** solve the equations, check your answers and copy them here:

$3y + 923 = 941$ $\qquad$ $975 - 5z = 625$ $\qquad$ $2x - 27 = 15$

$y =$ _____ $\qquad$ $y =$ _____ $\qquad$ $y =$ _____

9 Calculate **in your notebook**, and copy the results here:

$149 \times 7 =$ _____ $\qquad$ $903 \div 7 =$ _____ $\qquad$ $501 \div 3 =$ _____ $47 \times 6 =$ _____

Balance the scales by adding the right number of balls to the empty right side:

10
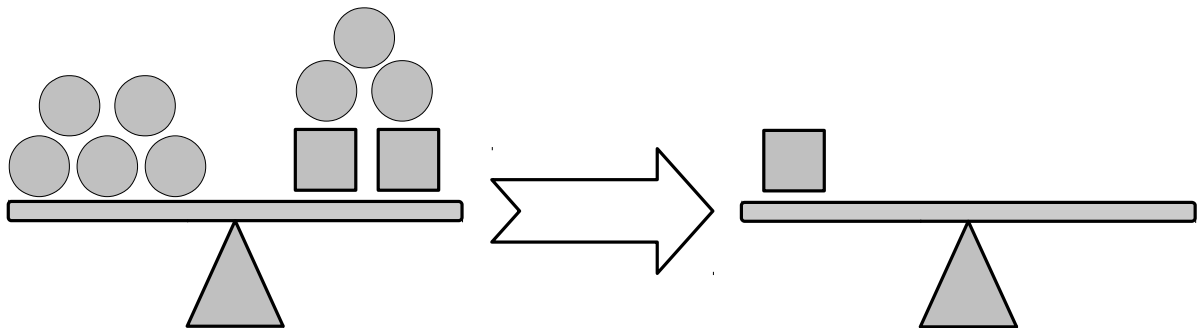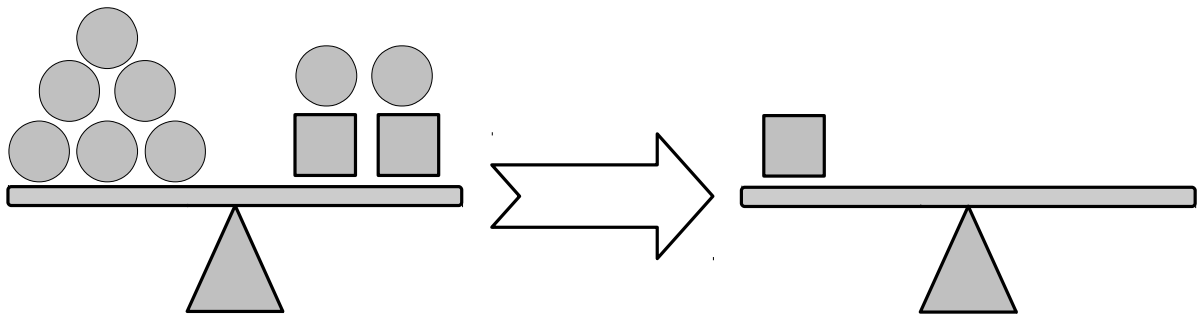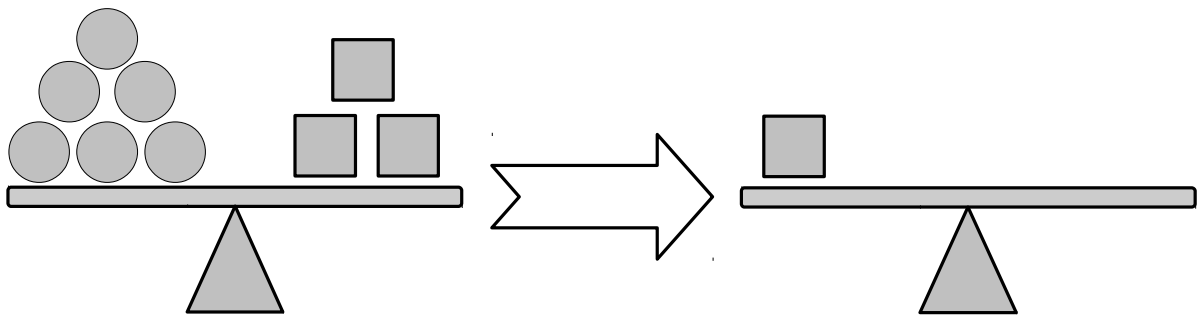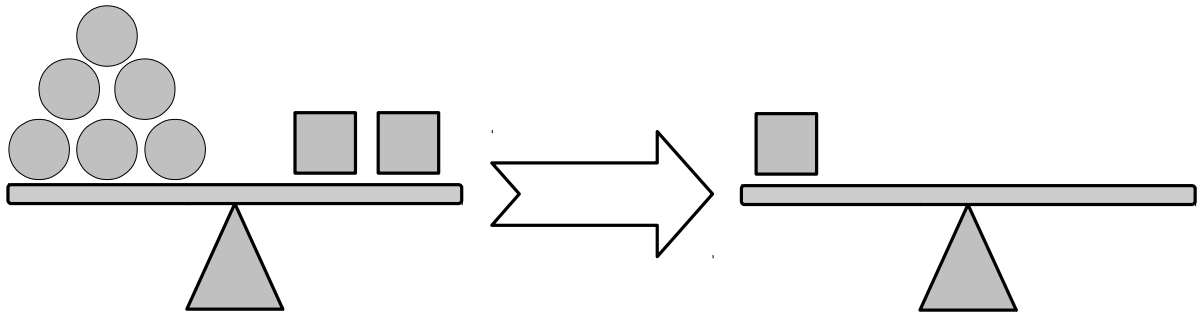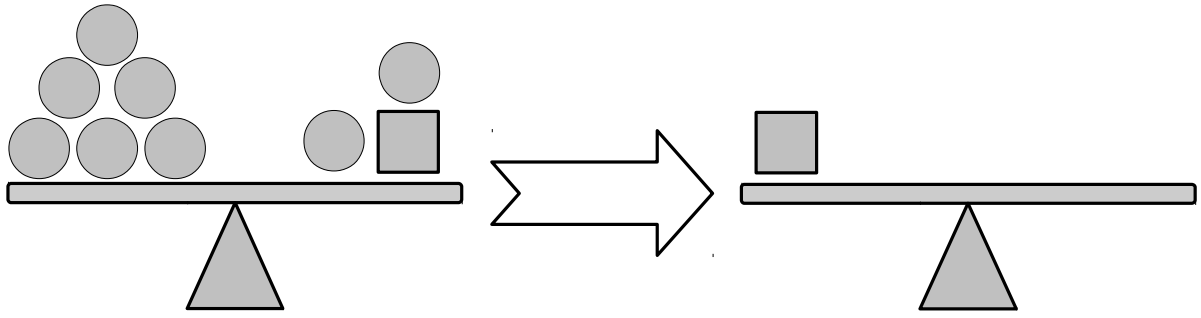
11 A school needs to take 45 students on a field trip to an art museum. Each van can take up to 7 students.

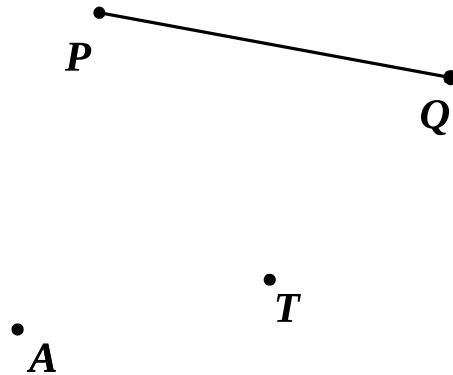How many vans can be filled with students? _____

How many vans are needed to take all 45 students? _____

How many students can possibly be in completely filled up vans? _____

How many more students can go on a trip using the same number of vans? _____
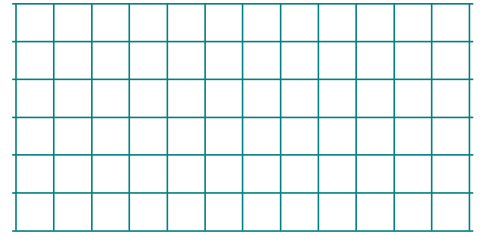
12 Construct the line segment *AB* that satisfies: 1. $B \in [AT)$ and 2. $|AB| = |PQ|$.
Write your algorithm in symbolic form:
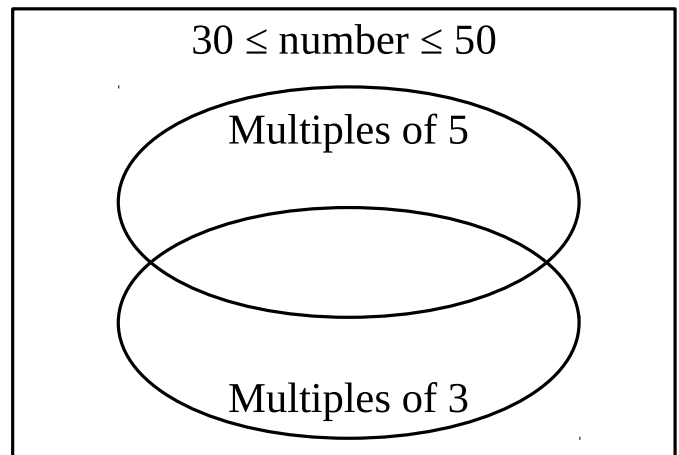
_____

_____

_____

_____

_____

P

Q

T

A

13 Look at the straight line *MN*.

$[MN) \cap [NM) =$ _____

$[MN) \cup [NM) =$ _____

N

M

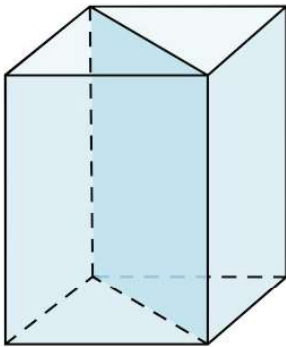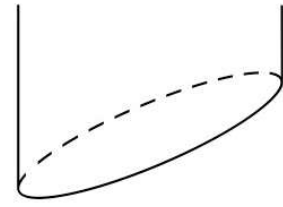**14** Write numbers from 30 to 50 in the right locations on the Venn Diagram.

$30 \leq$ number ≤ 50

Multiples of 5

Multiples of 3

15 Imagine each shape was cut into two parts. Finish the drawings of each part.
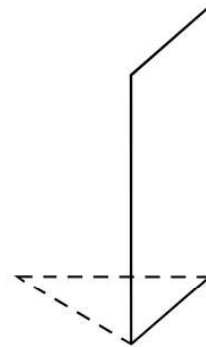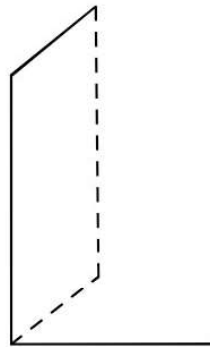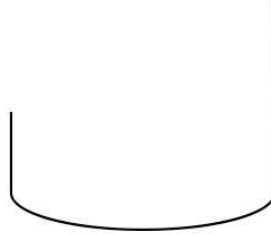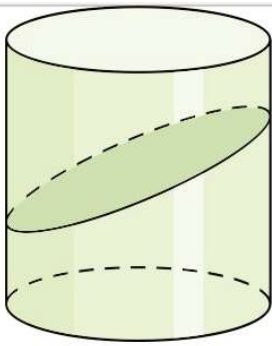
16 Find *all pairs* of supplementary angles on the drawing. Measure these angles with a protractor. Write down your results. Make sure supplementary angles add up to 180º.

$\angle AOB$ = 50º and $\angle BOD$=_____

_____

_____

_____

_____