1

What shape am I?

a) four sides; all sides equal; four right angles _____

b) four sides; opposite sides equal; four right angles _____

c) four sides; opposite sides parallel; no right angles _____

d) four sides; exactly two sides parallel _____

e) four sides; opposite sides equal; no sides perpendicular _____

f) four sides; opposite sides parallel; adjacent sides perpendicular _____

g) four sides; all sides equal; no sides perpendicular _____

h) four sides; no sides parallel; no sides perpendicular _____

2

Below is a drawing of a straight angle ∠BAE (remember that a straight angle is always 180°). The angle ∠DAE equals 75° and the angle ∠BAC = 25°.
a) Find an angle ∠CAD =

_____
b) Find an angle ∠BAD =

_____
a) Find an angle ∠CAE =

_____
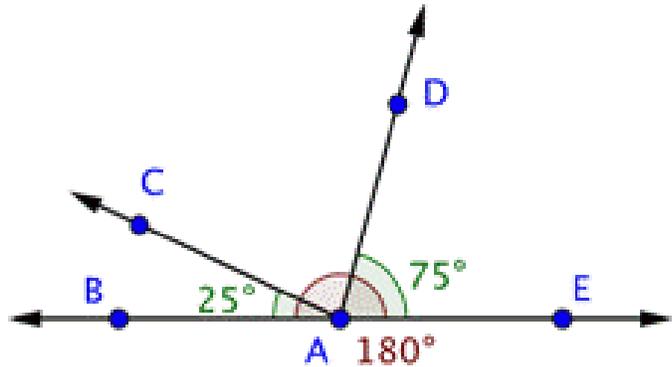
3

Calculate (simplify to the lowest term where possible)

$$\frac{12}{15} - \frac{3}{15} = \qquad \frac{9}{50} + \frac{21}{50} = \qquad \frac{18}{35} - \frac{13}{35} =$$

4

a) Find the coordinates of each vertex of triangle QPR

Q (,)   P (,)   R (,)

b) Reflect this triangle horizontally (flip across y-axis) to get a triangle Q'P'R'
Find the coordinates of each vertex:

Q' (,) P' (,)   R' (,)

c) Reflect this triangle vertically (flip across x-axis) to get a triangle Q"P"R"
Find the coordinates of each vertex for reflected triangle L"K"M":

Q" (,)   P" (,)   R" (,)
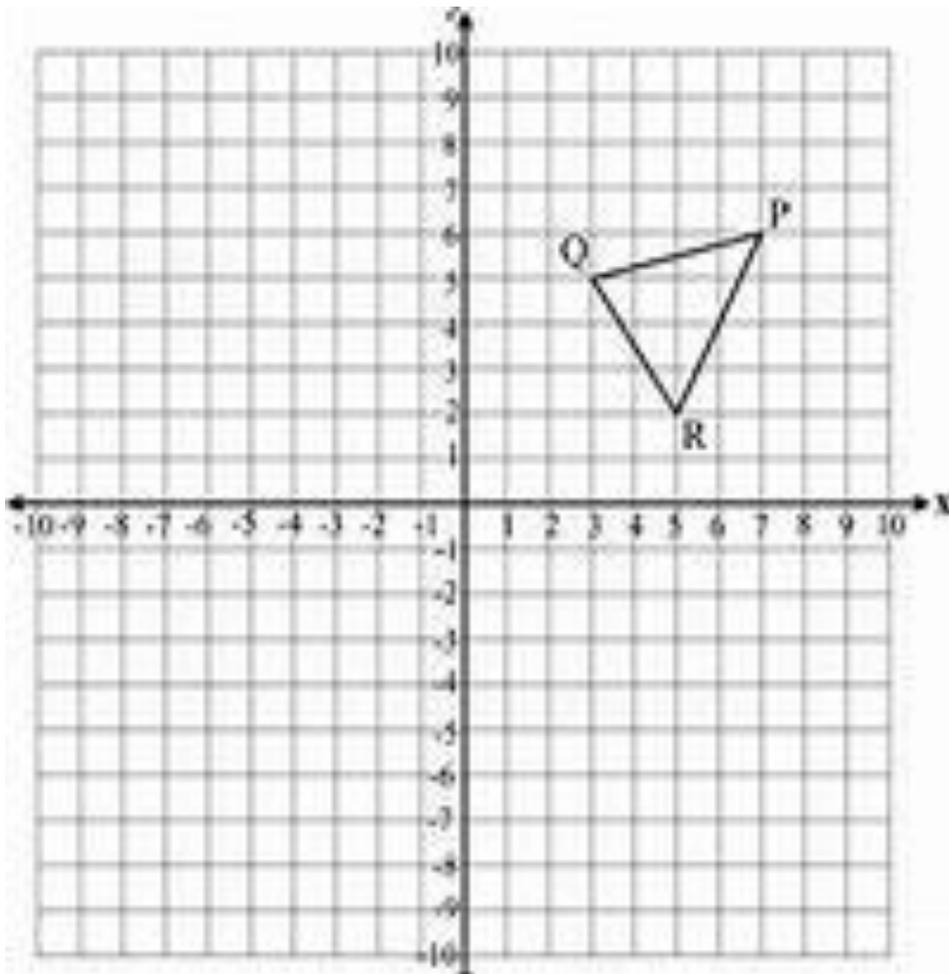
Insert the missing fraction:

5

a) _____ $+ \dfrac{1}{6} = 1\dfrac{5}{6}$ b) $2\dfrac{3}{5} +$ _____ $= 5\dfrac{4}{5}$ c) $\dfrac{3}{7} +$ _____ $= 3\dfrac{4}{7}$

d) _____ $+ \dfrac{3}{8} = 8\dfrac{5}{8}$ e) _____ $+ 5\dfrac{2}{9} = 10\dfrac{4}{9}$ f) _____ $- \dfrac{4}{5} = 9\dfrac{1}{5}$

6

a) Draw a circle with center point (5,6) and a radius of 3 units.

b) Draw another circle with the same center point but double the radius.

c) How many common points your second circle has with x-axis? _____

d) How many common points your second circle has with y-axis? _____
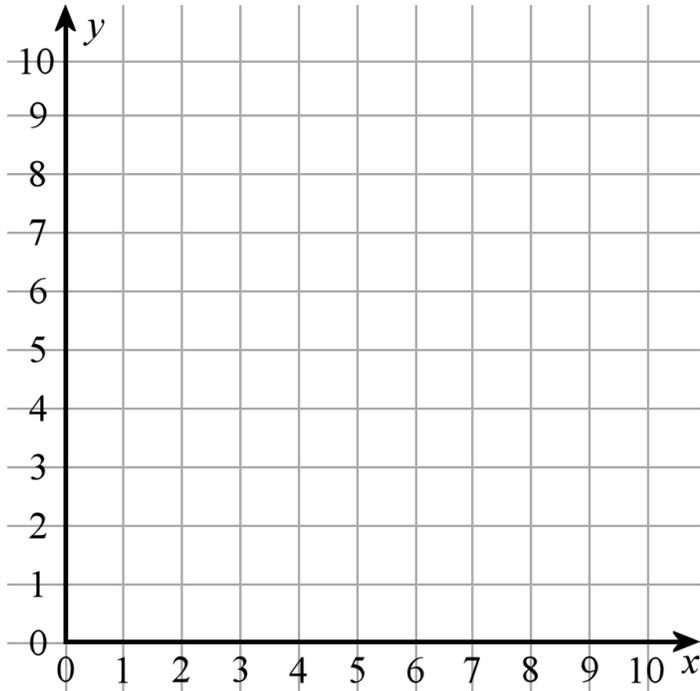

7

Write down the expressions:

a) Milan spent $a for a soccer ball. It was $14 less than he spent for his soccer cleats. Write and expression for a cleats's price.

_____

b) There are b boys in the class who play soccer, c boys in the class who play tennis and 4 boys who don't do any sport. Write an expression for a total number of boys in the class.

_____

c) The distance between your house and a school's bus stop is a meters, the distance between bus stop at school and your class is b meters. What is the distance you walk every day on your way to and from school?‾

_____

8

Calculate:

$5 + 3 =$ $5 + (-3) =$ $5 - 3 =$ $5 - (-3) =$

$-5 + 3 =$ $(-5) + (-3) =$ $(-5) - 3 =$ $(-5) - (-3) =$

9 Calculate:

a) $2{,}501 + 4{,}359 - 325 =$ b) $4{,}302 - 870 + 399 =$
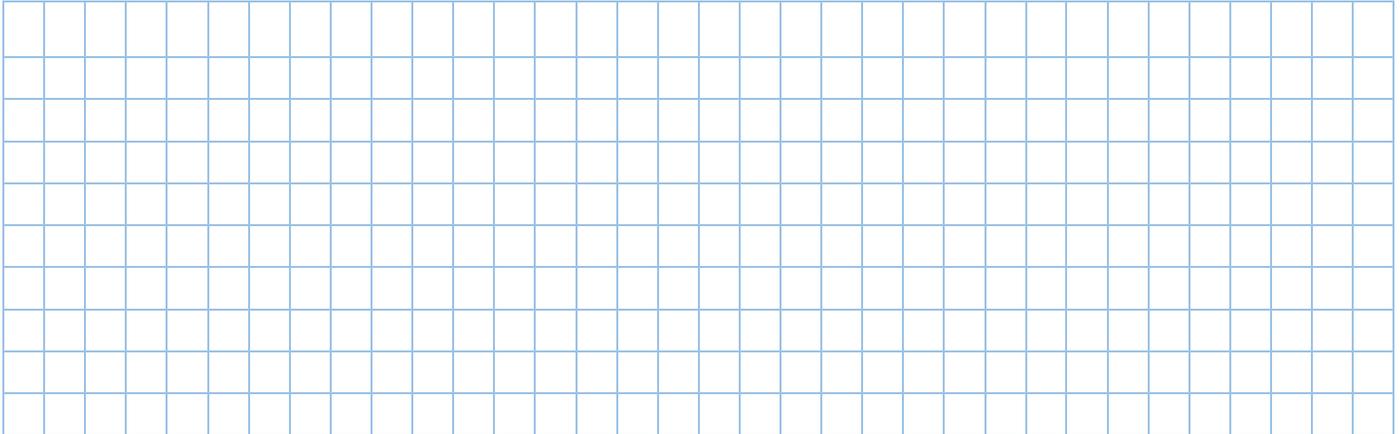
c) $2{,}536 \div 8 =$ d) $126 \times 35 =$
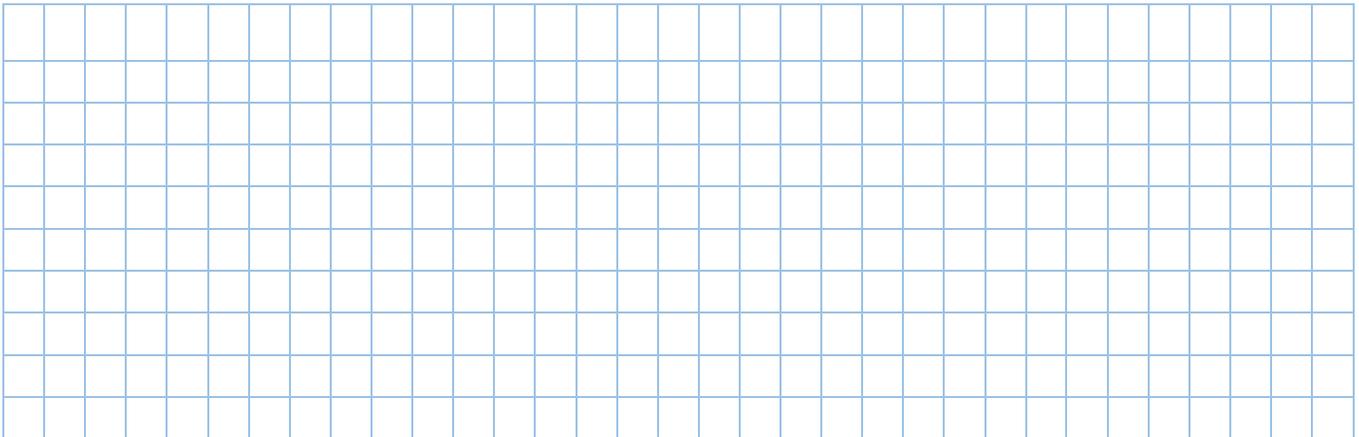
10 Solve the following equations using an inverse operation.

a) $4x + 35 = 5$ b) $x \div 3 - 4 = 26$ c) $4z + 5\frac{1}{2} = 6$

11
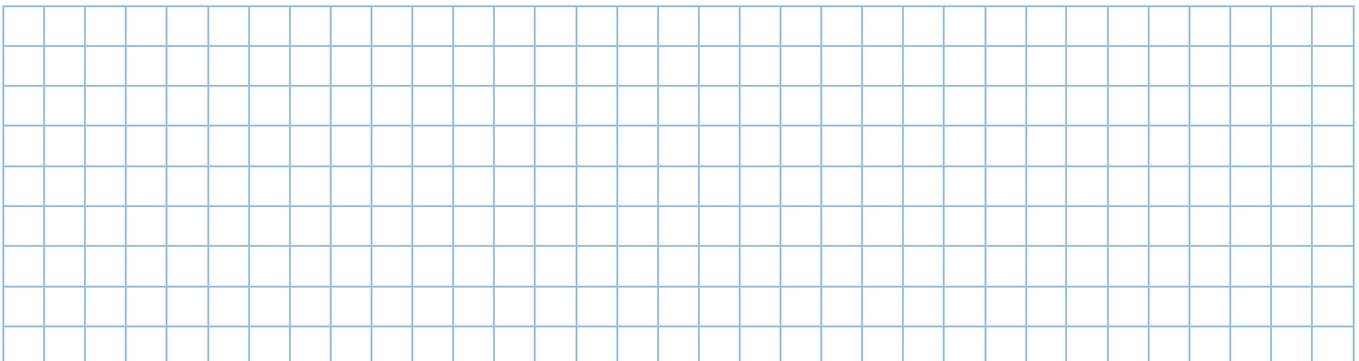
An angle below measures 60° degrees:
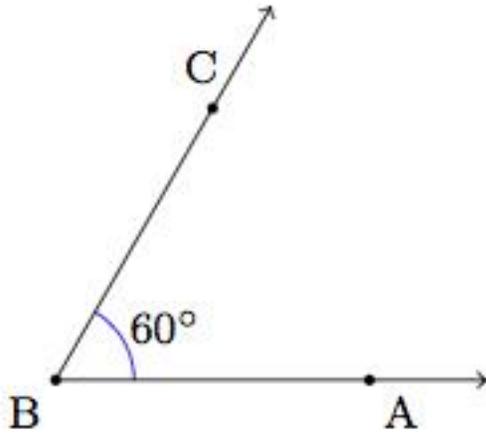
a) Draw another angle that measures 25° degrees. It should have the same vertex and share side *BA*.

b) How many angles are there in the figure you drew? What are their measures?

12

a) In the figure, *ABCD* is a rectangle and ∠*CAD*=31°. Find ∠*BAC*.
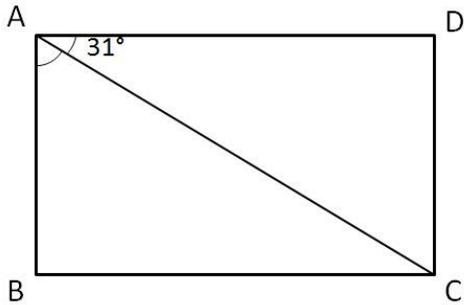
∠*BAC* = _____

13

Open parenthesis and simplify the expressions:

5(3 − a) +4(a − b + 10) = _____

10(d + 4) − 8(7 − d) = _____

3(20 + z) −2(10 − z + a) = _____

14 Write down a mathematical expression to solve the problems:

a) There is a total of 50kgs of potatoes packed in the 10 identical bags. How many kgs of potatoes are in x such bags?
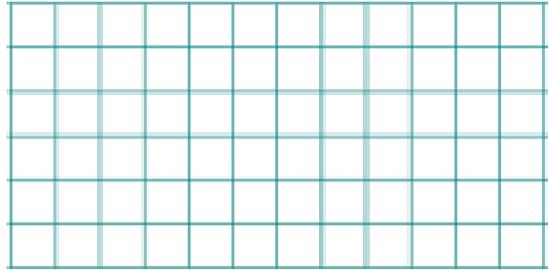
b) There are x kgs of potatoes packed in 12 identical bags. How many kgs of potatoes are in b such bags?
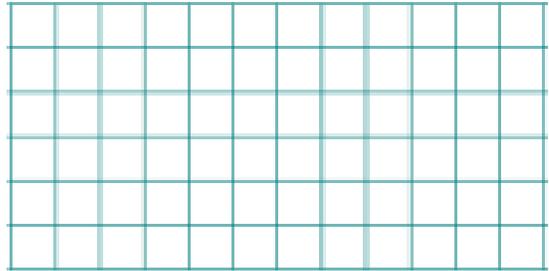
c) There are x kgs of potatoes packed equally into 10 bags. How many bags will be needed to pack z kgs of potatoes?
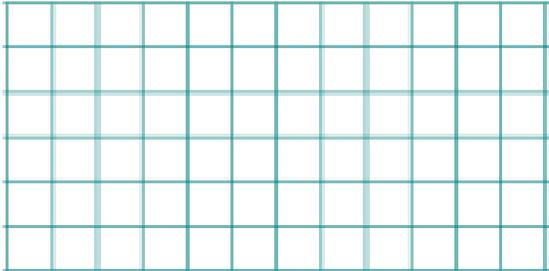
d) A construction crew repairs 600 meters of a road in one day. How much can be repaired in 9 days?
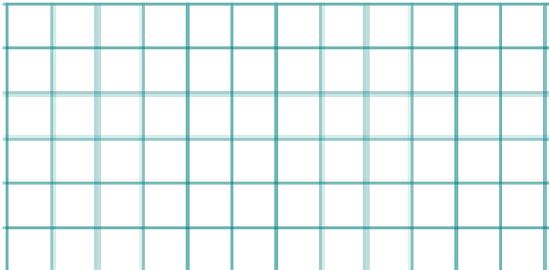
e) A construction crew repairs 600 meters of a road in one day. How much time is needed to repair 5km of the road?