1) Solve this equation: a + a + 2 = 5 + 4 + 1

2) Which is the expression?

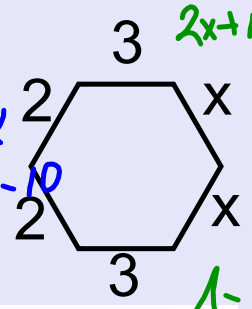
k + 3 OR b - 6 = 3

3) The perimeter of a square is 32 cm. Write an equation to find the side length of the square.

4) 4m + 1 = 9, m= ?

5) The perimeter of a shape is 24 cm.

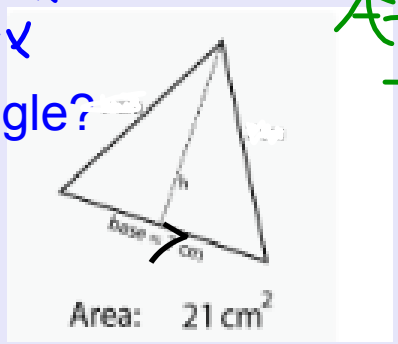
Find the value of x.



6) 10% of 250

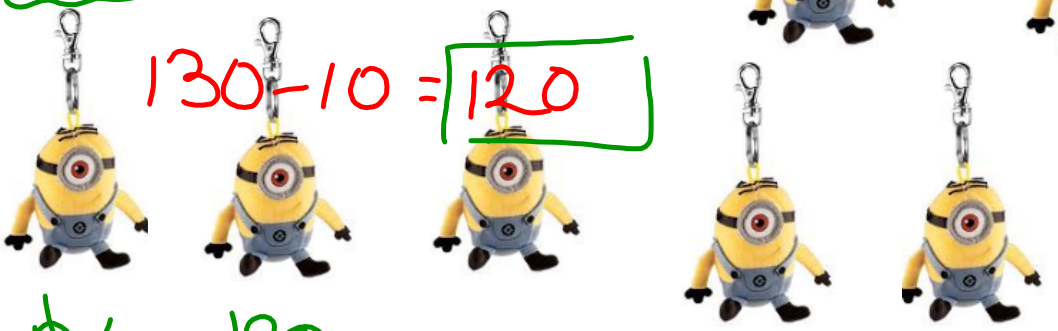
7) (+5) + (+2) =

8) What is the height of the triangle?



Assessment Focus Eli has 130 key chains. He keeps 10 key chains for himself, then shares the rest equally among his friends. Each friend then has 24 key chains.

a) Write an equation you can solve to find how many friends were given key chains.



$130 - 10 = 120$

$\frac{n}{120}$

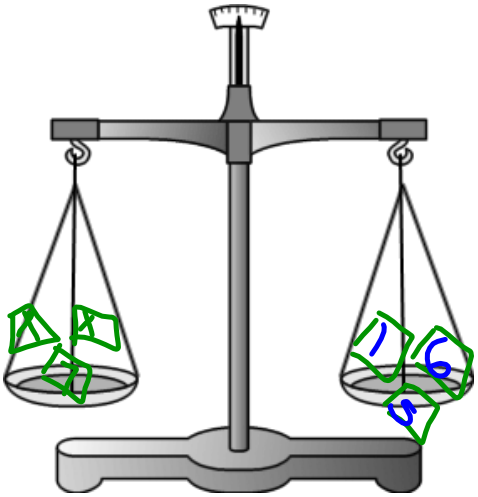
$\frac{120}{n} = 24$

$n = 5$

$\frac{24n}{24} = \frac{120}{24}$

$n = 5$

$3x = 24$



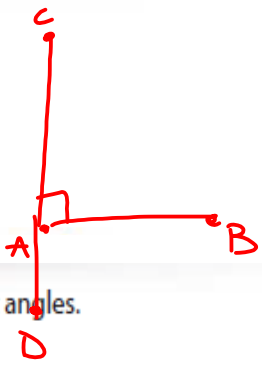
$2x + 7 = 12$

Parallel lines:

8.2 Perpendicular Lines

Focus Use different methods to construct and identify perpendicular line segments.

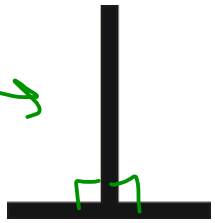
Identify perpendicular line segments in these photos. How could you check they are perpendicular?



2 that

Two line segments ~~are perpendicular if they~~ intersect at right angles.

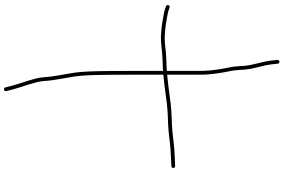
Recall that 2 lines intersect if they meet or cross.

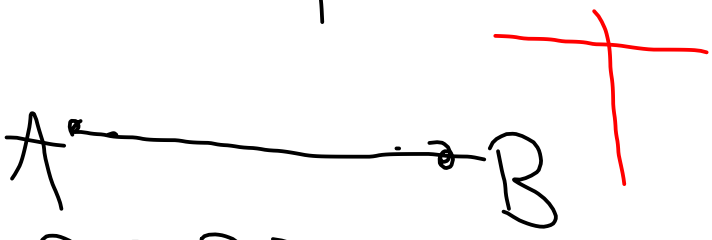


Review page.....

→ Protractor and Ruler:

→ Mira Pg. 304





Pg. 305

1, 2, 3, 5

Practice

1. Which lines are perpendicular? How do you know?

a) 

b) 

c) 

2. a) Draw line segment AB of length 6 cm.
Use a Mira to draw a line segment perpendicular to AB.

b) Draw line segment CD of length 8 cm. Mark a point on the segment.
Use paper folding to construct a line segment perpendicular to CD that passes through the point.
How do you know that each line segment you drew is perpendicular to the line segment?

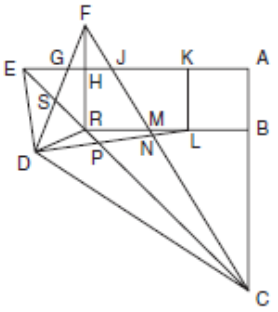
3. Draw line segment EF of length 10 cm.

a) Use a ruler and protractor to draw a line segment perpendicular to EF.

b) Use a ruler and compass to draw a line segment perpendicular to EF.

c) Check that the line segments you drew are perpendicular to EF.

4. Make a list of where you see perpendicular line segments in the world around you. Sketch diagrams to illustrate your list.



5. **Assessment Focus** Your teacher will give you a large copy of this diagram.
Find as many pairs of perpendicular line segments as you can.
How do you know they are perpendicular?

6. **Take It Further** Draw line segment JK of length 10 cm.
Use what you know about drawing perpendicular and parallel line segments to construct a rectangle JKMN, where KM is 4 cm.
Explain how you can check you have drawn a rectangle.

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