## Parallel and Perpendicular Lines

To identify parallel and perpendicular lines.

1) Draw arrows to show pairs of parallel lines.
a)

b)

c)

d)

e)

f)

2) Draw a line that is parallel to this line. Use a ruler.

|  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

3) Use the words in the box to complete the sentences about parallel lines.

4) Draw right angles to show pairs of perpendicular lines.
a)

b)

|  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

c)

|  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

d)

e)

f)

5) Complete the sentence about perpendicular lines. The first letter of the missing word is given.

6) Draw a shape that has both parallel and perpendicular lines. Use a ruler.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Parallel and Perpendicular Lines

To identify parallel and perpendicular lines.

1) There are five sets of parallel lines.

Chose a different colour for each pair of lines.
Colour them and add arrows to the lines to show they are parallel.
One pair has been done for you.

2) Complete the sentences about parallel lines.

We know when lines are parallel because they are always the $\qquad$
$\qquad$ apart. They will never $\qquad$ no matter how far they are $\qquad$ .
3) If the lines are perpendicular, draw a right angle where they meet.
a)

|  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

b)

|  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

c)

d)

e)

f)

4) Tick the shapes that have 1 set of parallel lines and 2 sets of perpendicular lines.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## Parallel and Perpendicular Lines

To identify parallel and perpendicular lines.

1) Draw these parallel lines:
a) one horizontal pair
b) one vertical pair
c) one pair that are neither horizontal nor vertical

Colour each pair a different colour and draw arrows to show they are parallel.

2) Write a description to explain what we mean by parallel lines.
$\qquad$
3) If the lines are perpendicular, draw a right angle where they meet.
a)

b)

c)

d)

e)

f)

|  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

4) a) Tick the shapes that have 2 sets of parallel lines and 3 sets of perpendicular lines.
b) Draw a different shape that also has 2 sets of parallel lines and 3 sets of perpendicular lines.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Parallel and Perpendicular Lines Answers

1) a)

c)

e)

b)

d)

f)

2) Accept any correctly drawn parallel line.
3) Use the words in the box to complete the sentences about parallel lines.

These 2 lines are parallel because they are always the same distance apart.
They will never meet no matter how far we extend them.
4) a)

b)

c)

|  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

d)

e)

f)

5)

These 2 lines are perpendicular because they are at right angles to each other.
6) Multiple answers possible, including regular and irregular polygons. For example:


## Parallel and Perpendicular Lines Answers

1) 


2)

We know when lines are parallel because they are always the same distance apart. They will never meet no matter how far they are extended.
3) a)

b)


Parallel and Perpendicular Lines Answers
c)

d)

e)

f)

4)


## Parallel and Perpendicular Lines Answers

1) 


2) An explanation that indicates that parallel lines are an equal distance apart and, if extended, they will never meet.
3) a)

c)

e)

d)
b)

f)

|  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |

4) a)

b) A shape drawn which has 2 sets of parallel lines and 3 sets of perpendicular lines. Example:

