Turtle 201   Rhombus

start
right 45
forward 300
right 45
forward 300
right 135
forward 300
right 45
forward 300

- Change the angles to make it different.
- Make a larger or small rhombus.

Turtle 202   Lightning

start
left 90
pen up
forward 400
right 90
forward 300
pen down
right 135
forward 150
left 90
forward 50
right 90
action 1

action 1
forward 150
left 90
forward 50
right 90
forward 150
left 90
forward 50
right 90
forward 150

- See if you can make the lightning come down at a greater angle.
- Make it more like lightning by changing the angles as it comes down.
- Try to make it have a 3D look, by having two lines come down near each other but with a gap between them.

Turtle 203   Hamburger Box

start
left	90
forward	250
back	500
left	135
forward	150
right	90
forward	150
right	45

action 1

action 1
forward	500
right	45
forward	150
right	90
forward	150
back	150
right	45
forward	710

- Make another box that is higher for a Big Mac.
- Can you create a lid on the box?

Turtle 204   House

start
forward	200
right	45
forward	140
right	90
forward	140
right	135
forward	200
left	135

action 1

action 1
forward	280
left	135
forward	200
left	135
forward	280
left	135
forward	200

- This doesn't line up real well. See if you can improve it.
- Try creating this design a different way. Maybe pen UP and DOWN could be used well with this design.

Turtle 205 Triangle

start	
right	45
forward	200
right	90
forward	200
right	135
forward	280

- Make different types of triangles. Look in a maths book or on the internet for different types of trianges.
- Create patterns of triangles.

Turtle 206 Saucepan or Pot

start	
left	45
forward	150
left	90
forward	30
left	90
forward	180
right	45
forward	50
action 1	

action 1	
left	90
forward	200
left	90
forward	200
left	90
forward	200
left	90
forward	110

- Make a bigger pot. Make it longer or shorter.
- Design a more interesting handle for your pot.
- Can you create a lid for the pot?

Turtle 207 Diamond Pattern

start		action 1	
ght	45	right	90
rward	300	forward	150
ght	90	right	90
rward	300	forward	300
ght	90	back	150
rward	300	right	90
ght	90	forward	150
rward	300	back	300
tion 1			

- See if you can put a square around this to make it look like a window. Use pen UP and DOWN so there are no lines joining the Diamond to the frame on the outside.

Turtle 208 Sun

start		action 1	
forward	120	forward	120
back	100	back	100
right	45	right	45
forward	120	forward	120
back	100	back	100
right	45	right	45
forward	120	forward	120
back	100	back	100
right	45	right	45
forward	120	forward	120
back	100	back	100
right	45		
action 1			

- Create different ones with a larger centre and longer lines.
- Can you make the lines go out and back again in a triangular shape?

Turtle 209 Kite

start	
right	45
forward	300
right	90
forward	300
right	90
forward	300
right	90
forward	300
action 1	

action 1	
right	135
forward	420
back	210
left	90
forward	210
back	420

- See if you can make a bigger kite.
- Change the shape of the kite so the bottom triangle section is longer and has a sharper point.
- Can you add a tail to the kite?

Turtle 210 Old Telephone

start	
left	90
forward	250
back	500
left	90
forward	100
right	90
forward	100
right	90
forward	50
left	90
forward	300
left	90
forward	50
action 1	

action 1	
right	90
forward	100
right	90
forward	100
back	100
right	90
forward	50
right	135
forward	250
left	135
forward	750
left	135
forward	250

- See if you can create some small squares on the front of the phone making it look more like a real phone.
- Can you create a cord on the phone?

TURTLE 211   LETTER W

start	
back	200
right	45
forward	150
right	90
forward	150
left	135
forward	200

- See if you can make a hat on top of the W.
- Imagine these are a persons legs. Can you draw a body, arms and a head for this person?

TURTLE 212   ? MARK

start			action 1	
forward	50		forward	100
right	45		pen up	
forward	50		forward	20
right	45		pen down	
forward	50		left	90
right	45		forward	10
forward	50		back	20
right	45		right	90
forward	50		forward	20
right	45		left	90
forward	50		forward	20
left	45		left	90
action 1			forward	20

- Create a question mark that is larger.
- Try to make an exclamation mark.
- Can you make the question mark with a rounded top?

TURTLE 213   LETTER M

start	
forward	200
right	135
forward	150
left	90
forward	150
right	135
forward	200

- See if you can write MUM.
- Create it sideways and put a round section on the open side making it look like a pac man.

TURTLE 214   ENVELOPE

start			action 1	
left	90		left	90
forward	250		forward	250
left	90		back	250
forward	300		left	45
left	90		forward	200
forward	500		right	45
left	90		forward	210
forward	300		right	45
action 1			forward	200

- Can you design a stamp to go on your envelope?
  See if you can design a stamp using rounded sections, pen UP and DOWN commands.

Turtle 215 Octogon

```
start
forward    180
right      45
forward    180
right      45
forward    180
right      45
forward    180
right      45
action 1
```

```
action 1
forward    180
right      45
forward    180
right      45
forward    180
right      45
forward    180
```

- Create a stop sign by adding the word STOP and a pole to it.
- Create two small octogons and put a circle around them, making a face.
- See if you can make a closed shape with more than 8 sides.

Turtle 216   Crown

```
start
right      45
forward    50
right      90
forward    50
left       90
forward    50
right      90
forward    50
left       90
forward    50
right      90
forward    50
action 1
```

```
action 1
left       90
forward    50
right      90
forward    50
right      45
forward    100
right      90
forward    280
right      90
forward    100
```

- Can you draw a head under the crown.
- Make a bigger crown and put some shapes in it like diamonds.

Turtle 217   Letter Z

start	
right	45
forward	200
left	135
forward	150
pen up	
set xy x	0
y	0
pen down	
right	180
forward	150

- What else can you turn this Z into?

Turtle 218   Zig Zag

start		action 1		
right	45	seth	0	
forward	150	pen down		
right	90	left	45	
forward	150	forward	150	
left	90	left	90	
forward	150	forward	150	
right	90	right	90	
forward	150	forward	150	
left	90	left	90	
forward	150	forward	150	
pen up		right	90	
set xy x	0	forward	150	
y	0			
action 1				

- Make another Zig Zag that has sharper angles.
- Make another Zig Zag that has blunt angles.
- What else can you make?

TURTLE 219   LETTER K

start	
forward	250
back	120
right	45
forward	180
back	180
right	90
forward	180

- What other ways can you create the letter K?

TURTLE 220   SPRING

start	
right	45
forward	100
right	90
forward	100
left	90
forward	100
right	90
forward	100
left	90
forward	100
right	90
forward	100
action 1	

action 1	
left	90
forward	100
back	50
left	90
back	50
forward	100
left	90
forward	100
right	90
forward	100
left	90
forward	100
action 2	

action 2	
right	90
forward	100
left	90
forward	100
right	90
forward	100

- See if you can make this go vertical (up) instead of across.
- Make the springs bigger or flatter.
- See if you can make a more realistic spring using rounded curves.

Turtle 221 Triangle

start	
forward	300
right	135
forward	430
right	135
forward	300

- This is a right angled triangle. Can you make an equilateral triangle (all sides the same length).
- See if you can make an isosceles triangle (two sides = length).
- A scalene triangle might be a challenge.

Turtle 222 Star

start			action 1	
left	135		left	135
forward	240		forward	240
left	135		left	135
forward	240		forward	240
left	135		left	135
forward	240		forward	240
left	135		left	135
forward	240		forward	240
action 1				

- Make the points on the star sharper (more pointed).
- Create a star with a different number of points.

TURTLE 223   DIAMOND

start

right	45
forward	200
right	90
forward	200
right	90
forward	200
right	90
forward	200

- See if you can make a bigger diamond?
- See what happens if you keep running this program from where the turtle stops.

TURTLE 224   TENT

start

pen up	
back	320
left	90
forward	300
right	135

pen down

forward	600
right	90
forward	600

action 1

action 1

right	135
forward	850
back	420
right	90
forward	420

- Can you make a zipper (fly) on the tent.
- Maybe you could add some poles and turn it into a garage.

TURTLE 225   BOOMERANG

start
left	45
forward	250
set xy	x 0
	y 0
seth	0
right	45
back	250
right	45
forward	60
left	45

action 1

action 1
forward	250
left	90
forward	250
left	45
forward	60

- Make some more of these to the right of the first one so it looks like the stripes on a police uniform.
- Draw another boomerang using different angles.

TURTLE 226   PICKET FENCE

start
forward	200
right	45
forward	50
right	90
forward	50
right	45
forward	200
back	200
left	135
forward	50
right	90
forward	50

action 1

action 1
right	45
forward	200
back	200
left	135
forward	50
right	90
forward	50
right	45
forward	200
back	200
left	135
forward	50

action 2

action 2
right	90
forward	50
right	45
forward	200
back	200
left	135

- Make the fence taller. Add more sections to the fence.
- Draw a gate swinging from the fence.

Turtle 227   Rhombus

start

forward	150
right	45
forward	150
right	135
forward	150
right	45
forward	150

- Make another rhombus with different size angles.
  Note: All four sides must be of equal length and opposite angles need to be the same too.

Turtle 228   Face

start

forward	250
right	90
forward	250
right	90
forward	250
right	90
forward	250
right	135
pen up	
forward	100
right	90
pen down	

action 1

action 1

forward	40
left	45
forward	50
left	45
forward	40
pen up	
left	45
forward	30
left	90
forward	40
pen down	
forward	20

action 2

action 2

back	10
right	90
forward	40
pen up	
right	90
forward	30
pen down	
forward	40
pen up	
back	100
pen down	
back	40

- See if you can add some hair to the head.
- Create other faces with different features. Perhaps you could have round, triangular or oblong heads; eyes could be round, square, slanted, etc.

Turtle 229   Garbage Bin

start	
left	10
forward	500
back	500
right	100
forward	300
left	80
forward	500
back	500
left	100
forward	150
right	90
forward	500
back	500
action 1	

action 1	
left	90
forward	75
right	85
forward	500
back	500
right	95
forward	150
left	85
forward	500
back	500

- Design a different type of garbage bin.

Turtle 230   O X O = Game

start	
forward	300
back	600
right	90
pen up	
forward	200
pen down	
left	90
forward	600
back	200
action 1	

action 1	
right	90
forward	200
back	600
right	90
pen up	
forward	200
pen down	
left	90
forward	600
pen up	
set xy	x 0 / y 0
seth	0
pen down	

action	Circle
left	90
pen up	
forward	50
pen down	
right	90
angle	360
arc radius	50

action	Cross
left	45
forward	50
back	100
forward	50
right	90
forward	50
back	100
forward	50
left	45

- This is just one very simple way to make a noughts and crosses game (tic-tac-toe). See if you can design a better method to make and play the game.
- Can you make another type of game?

Turtle 200   My Design

TURTLE BLOCKS

TURTLE ART

LOGO

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Turtle 200   My Design

TURTLE BLOCKS

TURTLE ART

LOGO

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