



UPGRADING AND SERVICING GUIDE



HP TouchSmart³¹⁰

Computer features may vary by model.

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Removing and replacing a CD-DVD drive



HP TouchSmart³¹⁰

Computer features may vary by model.

Before You Begin

Observe the following requirements before removing and replacing the CD/DVD drive.

IMPORTANT: A CD/DVD drive is extremely sensitive to shock impact. Do not bang or drop it.



WARNING:

- **Never open the cover with the power applied. You might damage your computer or be injured by the spinning fan blades.**
 - **Avoid touching sharp edge inside the computer.**
 - **Keep your hands away from the moving fan.**
 - **Keep fingers and tools clear of the fan when the power is applied.**
-



CAUTION: Static electricity can damage the electronic components inside the computer. Discharge static electricity by touching the metal cage of the computer before touching any internal parts or electronic components.

Tools Needed

- Flathead screwdriver
- Phillips screwdriver #1

Small screws are easily lost. Remove screws over a surface that allows you to retrieve them if they fall.

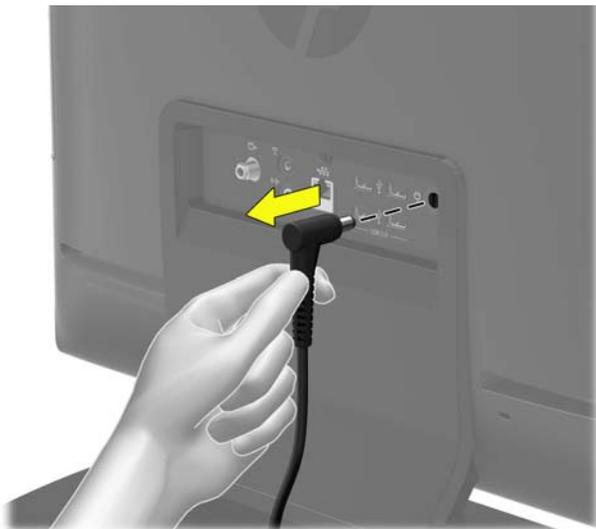
Removing and Replacing a CD/DVD Drive



10 - 15 minutes

Removing the CD/DVD Drive

- 1 Remove items such as CDs, DVDs, and USB storage devices from the computer.
- 2 Close all open programs and shut down your operating system.
- 3 Unplug the computer by disconnecting the power cord from the back of the computer.



- 4 Unplug all attached cables from the back of the computer.



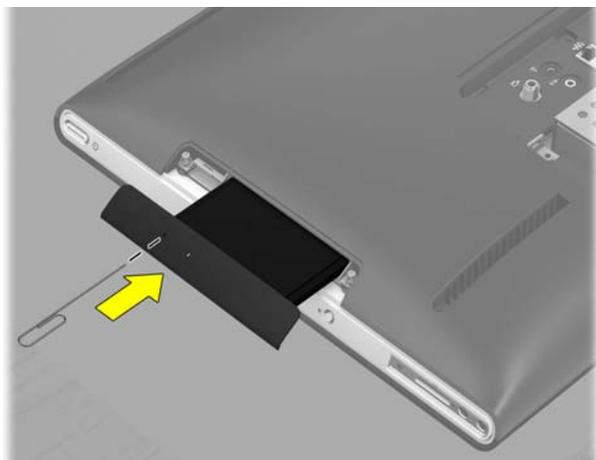
- 5 Lay the computer down on a flat surface, covered with a soft cloth to protect the screen from scratches or other damage.



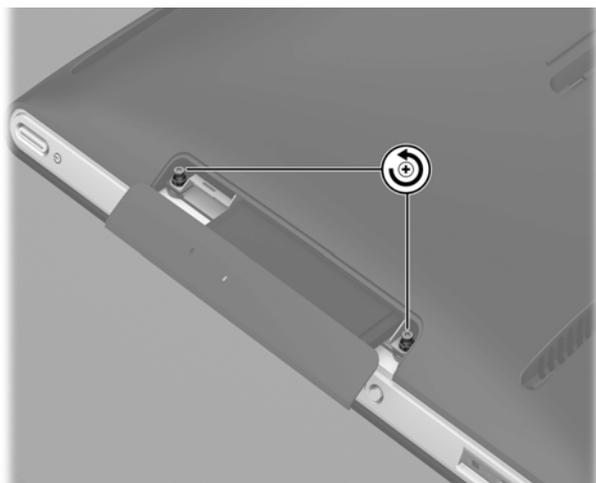
- 6 Locate the CD/DVD drive on the side of the computer.



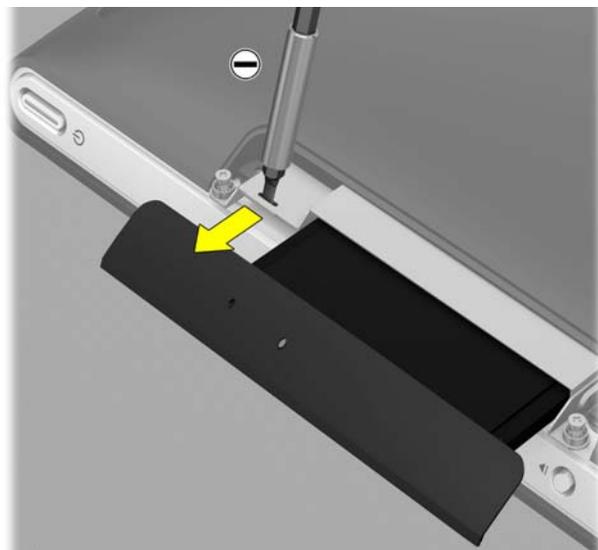
- 7 Insert the tip of a large paper clip into the hole on the CD/DVD drive bezel to release the CD-DVD drive tray.



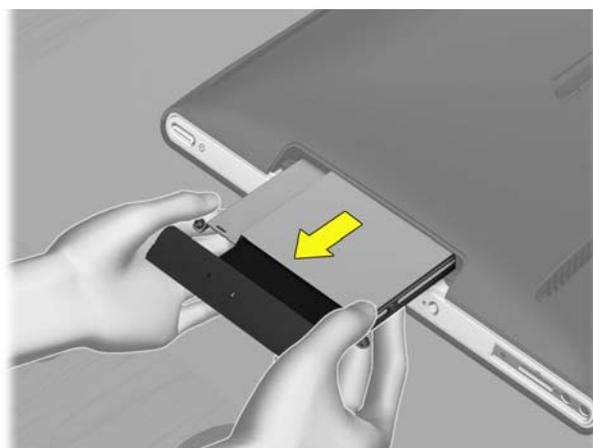
- 8 Loosen the two captive screws on the CD/DVD tray with a #1 Phillips screwdriver.



- 9 Insert a flathead screwdriver into the slot to gently push out the CD/DVD tray.



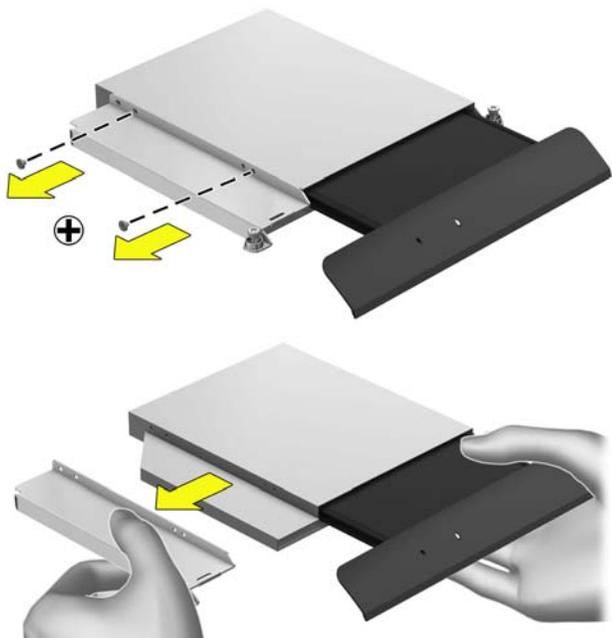
- 10 Remove the CD/DVD drive tray from the computer.



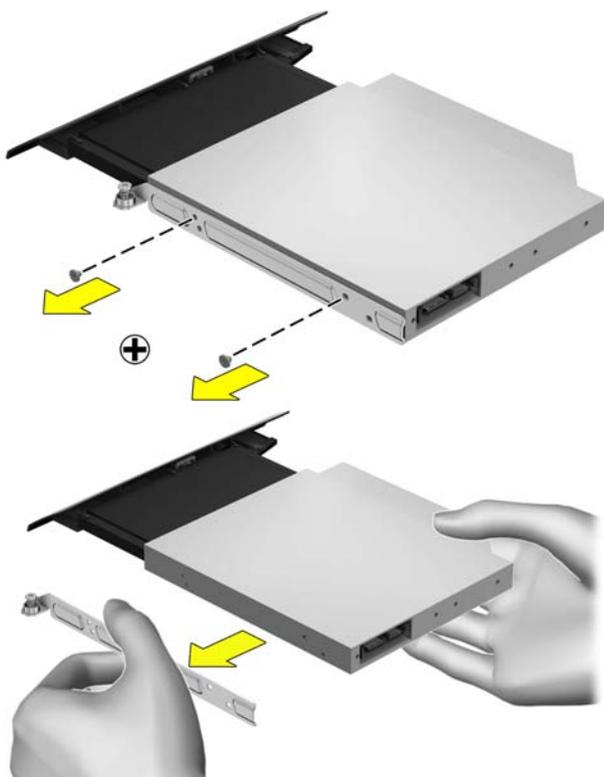
CAUTION: Be sure to push out the entire CD/DVD drive tray. Do not pull out the CD/DVD drive so that it is exposed. Touching the CD/DVD drive could damage it.



- 11** Remove the bracket on one side of the CD/DVD tray by removing the two screws. Save the bracket and the screws.



- 12** Remove the bracket from the second side of the CD/DVD tray. Save the bracket and the screws.



NOTE: Do not lose the CD/DVD bracket and screws. You will fasten the CD/DVD bracket to the new CD/DVD drive.

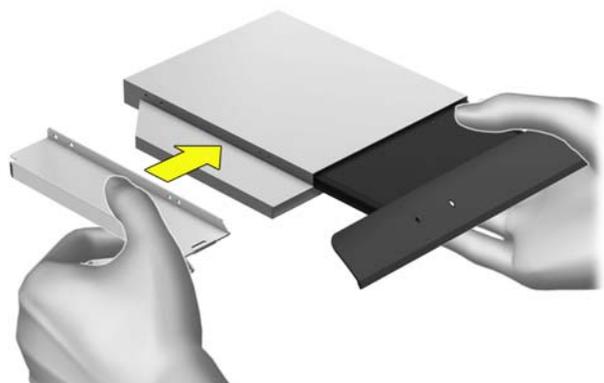
Installing a New CD/DVD Drive

NOTE: The replacement CD/DVD drive may not look exactly the same as the original drive due to different manufacturers or models. Hewlett-Packard always provides quality parts that meet or exceed your original computer specifications.

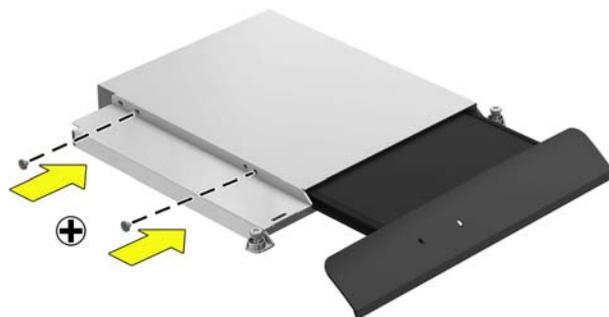
- 1** Insert the tip of a large paper clip into the hole of the CD/DVD drive bezel to release it. This makes it easier to install the brackets on the CD/DVD drive.



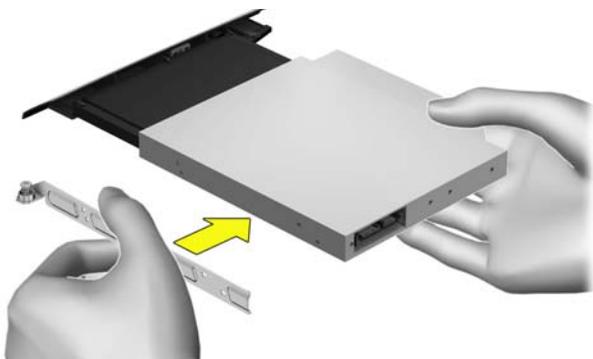
- 2** Replace one bracket the side of the CD/DVD drive.



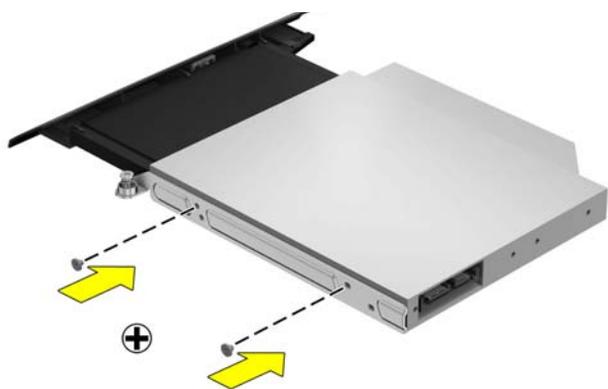
- 3** Align the screw holes on the bracket with the screw holes on the drive and replace the two screws.



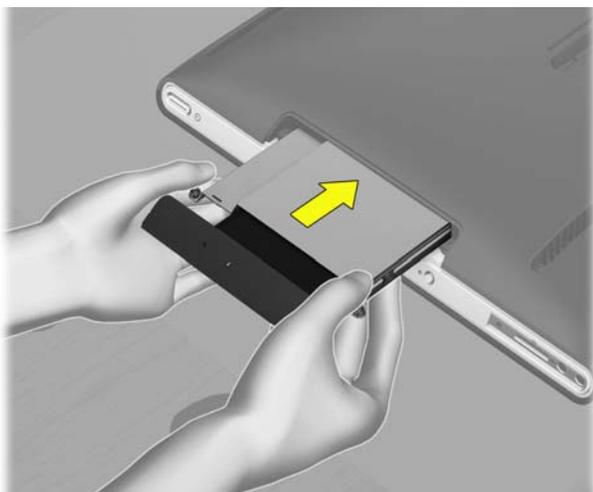
- 4 Replace the second bracket on the other side of the CD/DVD drive.



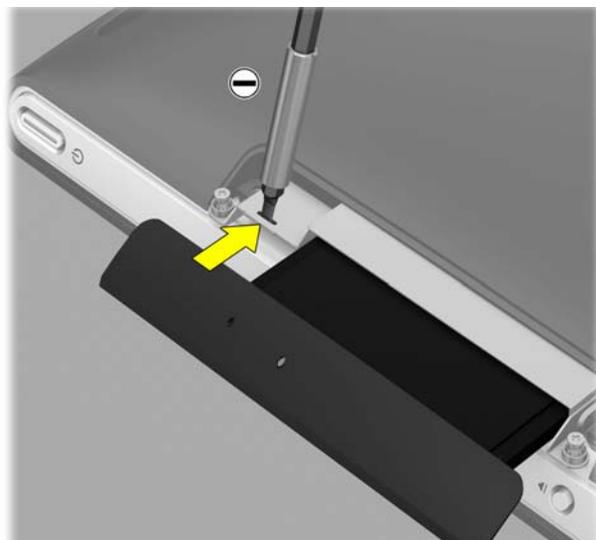
- 5 Align the screw holes on the bracket with the screw holes on the drive and replace the two screws.



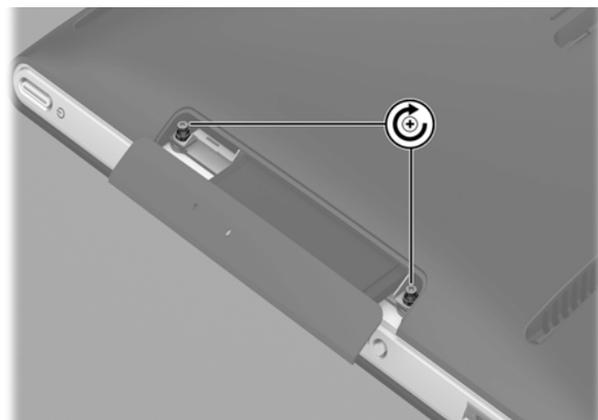
- 6 Slide the CD/DVD drive assembly partially into the computer.



- 7 Insert a flathead screwdriver into the slot to push the CD/DVD drive in further.



- 8 Tighten the two captive screws.



- 9 Push the CD/DVD drive all the way in until the bezel on the tray is flush with the side of the computer.



10 Place the computer in an upright position.



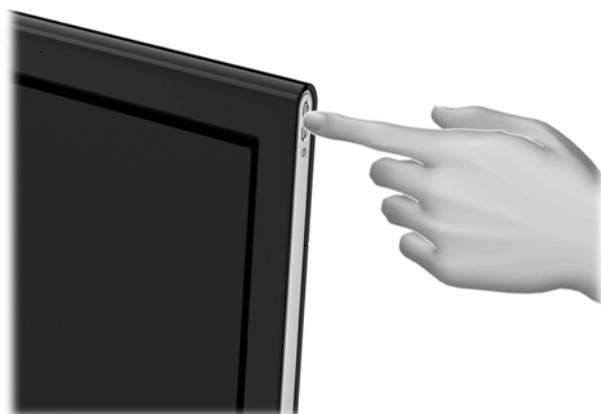
12 Plug the power cord into the back of the computer.



11 Reconnect all the cables.



13 Press the power button to turn on the computer.



TASK COMPLETED



Removing and replacing a Hard Disk Drive



HP TouchSmart³¹⁰

Computer features may vary by model.

Before You Begin

Observe the following requirements before removing and replacing the hard disk drive.

IMPORTANT: A hard disk drive is extremely sensitive to shock impact. Do not bang or drop it. Do not touch the circuit board. Static electricity can damage the drive.



WARNING:

- **Never open the cover with the power applied. You might damage your computer or be injured by the spinning fan blades.**
 - **Avoid touching sharp edges inside the computer. Keep your hands away from the moving fan.**
 - **Keep fingers and tools clear of the fan when the power is applied.**
-



CAUTION: Static electricity can damage the electronic components inside the computer. Discharge static electricity by touching the metal cage of the computer before touching any internal parts or electronic components.

Tools Needed

- Flathead/Torx screwdriver #15
- Phillips screwdriver #1

Small screws are easily lost. Remove screws over a surface that allows you to retrieve them if they fall.

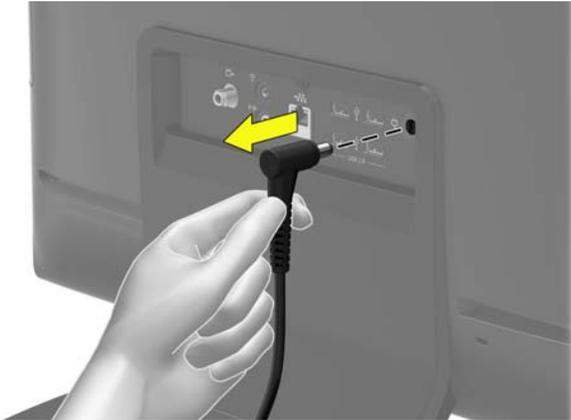
Removing and Replacing a Hard Disk Drive



15-20 MINUTES

Removing the Hard Disk Drive

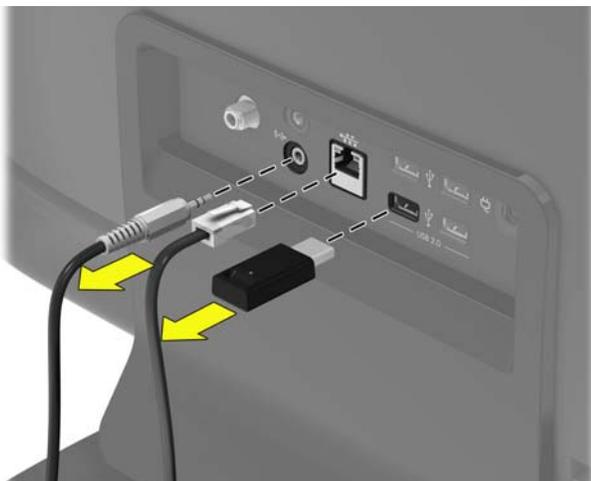
- 1 Remove items such as CDs, DVDs, and USB storage devices from the computer.
- 2 Close all open programs and shut down your operating system.
- 3 Unplug the computer by disconnecting the power cord from the back of the computer.



- 5 Lay the computer down on a flat surface, covered with a soft cloth to protect the screen from scratches or other damage.



- 4 Unplug all attached cables from the back of the computer.



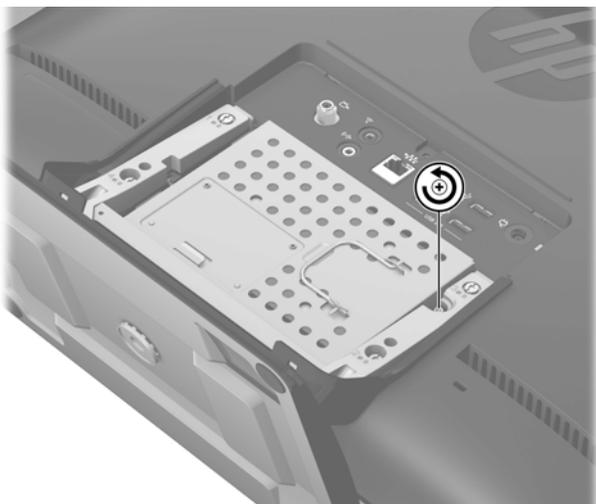
- 6 Use a flathead or Torx screwdriver to remove the screw at the back of the computer that attaches the stand cover to the stand.



7 Remove the stand cover from the stand.



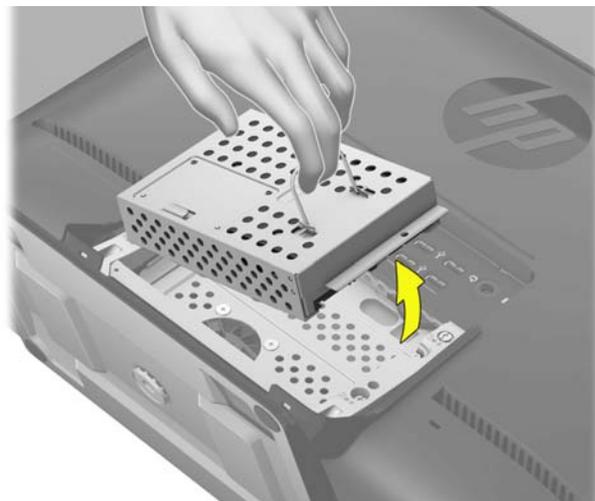
8 The hard disk drive is underneath the stand cover. Use a #1 Phillips screwdriver to loosen the captive screw that secures the hard disk drive cage to the computer. This screw is not removed.



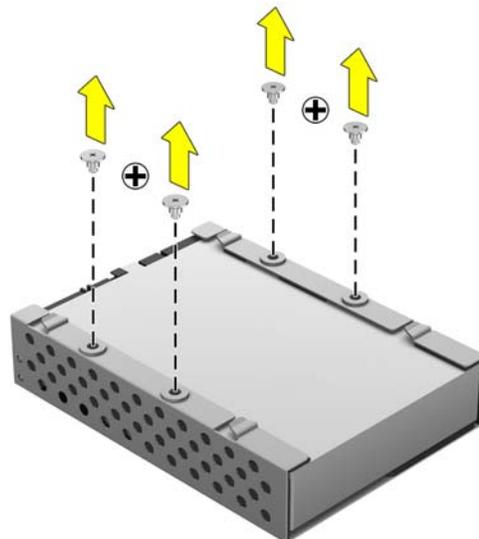
9 Use the metal handle on the hard-disk drive cage to slide the cage in the direction indicated by the arrow on the cage.



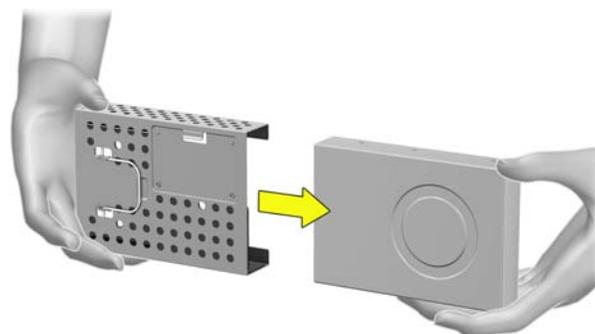
10 Lift the hard disk drive cage out of the computer.



11 Use a #1 Phillips screwdriver to remove the four screws from bottom of the hard disk drive cage. Save the screws.



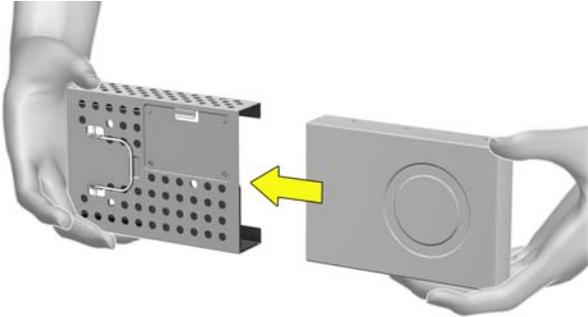
12 Slide the hard disk drive out of the cage.



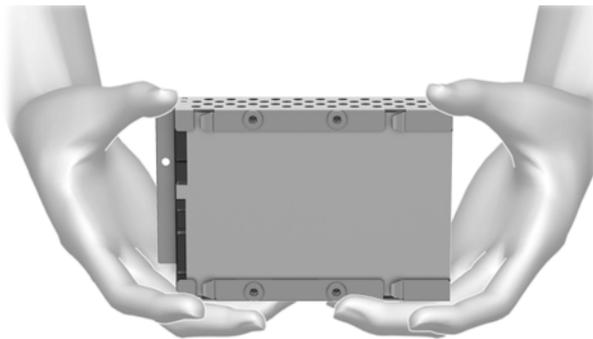
Installing a New Hard Disk Drive

NOTE: The replacement hard disk drive may not look exactly the same as the original drive due to different manufacturers or models. Hewlett-Packard always provides quality parts that meet or exceed your original computer specifications.

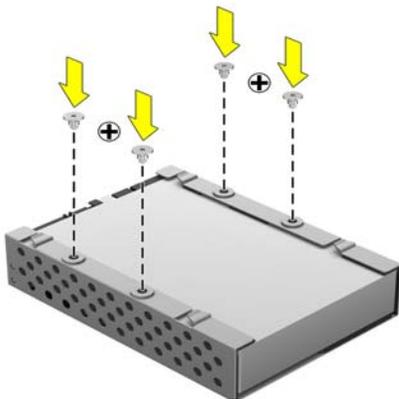
- 1 Insert the new hard disk drive into the cage. Make sure that the hard disk drive is inserted with the label facing up.



- 2 Align the hard disk drive screw holes with the screw holes on the cage.

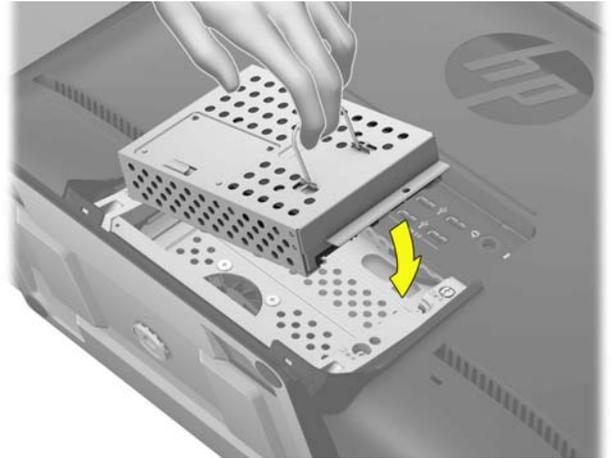


- 3 Replace the four screws on the bottom of the hard drive cage.

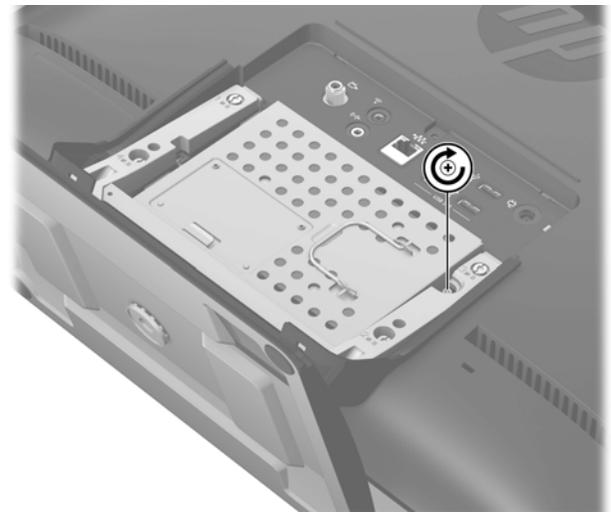


NOTE: The four screws that secure the hard disk drive to the hard-disk drive cage may have had rubber grommets. These grommets can fall off when you remove the hard drive from the hard-drive cage. Replacement grommets might be included with the new hard drive. If so, place a new grommet over each hole before fastening the screw.

- 4 Hold the wire handle on the hard drive cage to insert the cage into the computer. Push the cage to the right until it locks into position.



- 5 Tighten the captive screw with a Phillips #1 screwdriver.



6 Replace the stand cover on the stand at the back of the computer.



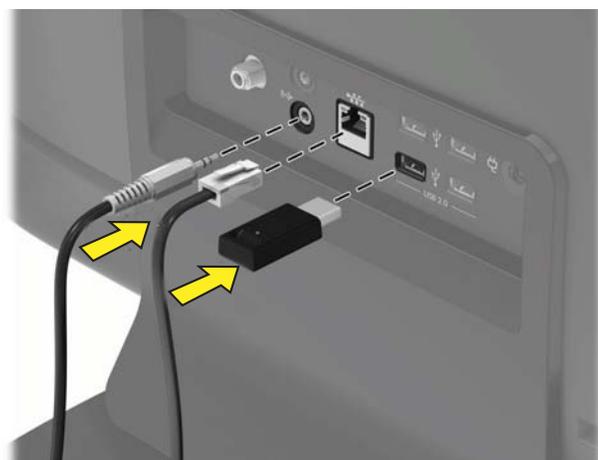
7 Tighten the screw that secures the stand cover to the back of the computer.



8 Place the computer in an upright position.



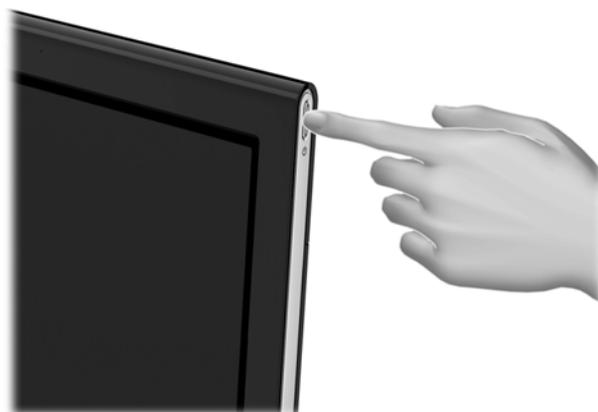
9 Reconnect all the cables.



10 Plug the power cord into the back of the computer.



11 Press the power button to turn on the computer.



NOTE: If your hard disk drive was shipped without an operating system installed, you will need to reinstall it using the system recovery discs.

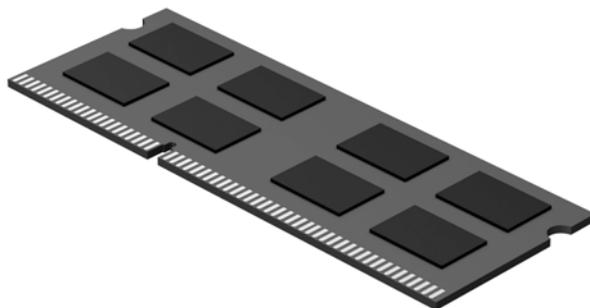
To install the operating system, refer to the instructions included with your system recovery discs, or available from the HP support site (www.hp.com/support).

After the operating system has been installed, you will need to reinstall any applications and restore any data you backed up.





Upgrading or replacing Memory



HP TouchSmart³¹⁰

Computer features may vary by model.

Before You Begin

Observe the following requirements before removing and replacing memory.

IMPORTANT: A memory card is extremely sensitive to shock impact. Do not bang or drop it. Static electricity can damage the card.



WARNING:

- **Keep your hands away from the moving fan.**
 - **Keep fingers and tools clear of the fan when the power is applied.**
 - **Never open the cover with the power applied. You might damage your computer or be injured by the spinning fan blades.**
 - **Avoid touching sharp edges inside the computer.**
-



CAUTION: Static electricity can damage the electronic components inside the computer. Discharge static electricity by touching the metal cage of the computer before touching any internal parts or electronic components.

Tools Needed

- Flathead or Torx screwdriver #15
- Phillips screwdriver #1

Small screws are easily lost. Remove screws over a surface that allows you to retrieve them if they fall.

Memory Compatibility

Verify that the memory installed is compatible with this computer. SO-DIMMs are small outline dual inline memory modules. They are smaller and thinner than most other DIMMs, so that they take less space in the case.

SO-DIMM modules must meet the following requirements:

- 200-pin DDR2-DIMM
- PC2-4200 (533 MHz) DDR2-SDRAM or PC2-5300 (667 MHz) DDR2-SDRAM
- Unbuffered, non-ECC (64-bit) DIMMs
- 1.8 V memory only
- 4.0 GB maximum installable memory. Actual available memory that can be used in Windows will be less.

Because the memory uses dual channels, you should use the same DIMM type for both sockets.

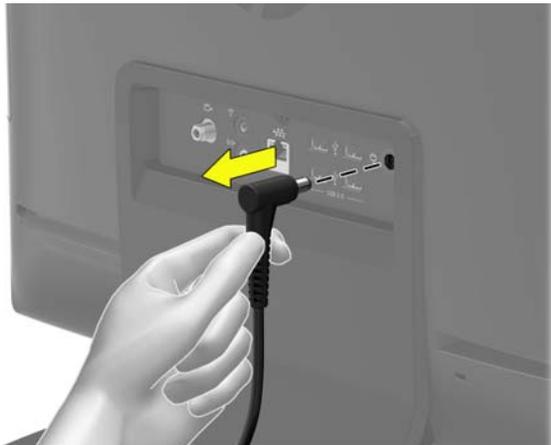
Upgrading or Replacing Memory



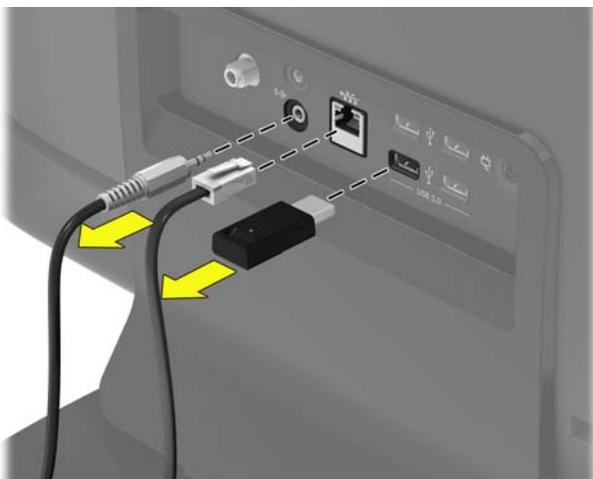
10 - 15 minutes

Removing the Memory

- 1 Remove items such as CDs, DVDs, and USB storage devices from the computer.
- 2 Close all open programs and shut down your operating system.
- 3 Unplug the computer by disconnecting the power cord from the back of the computer.



- 4 Unplug all attached cables from the back of the computer.



- 5 Lay the computer down on a flat surface, covered with a soft cloth to protect the screen from scratches or other damage.



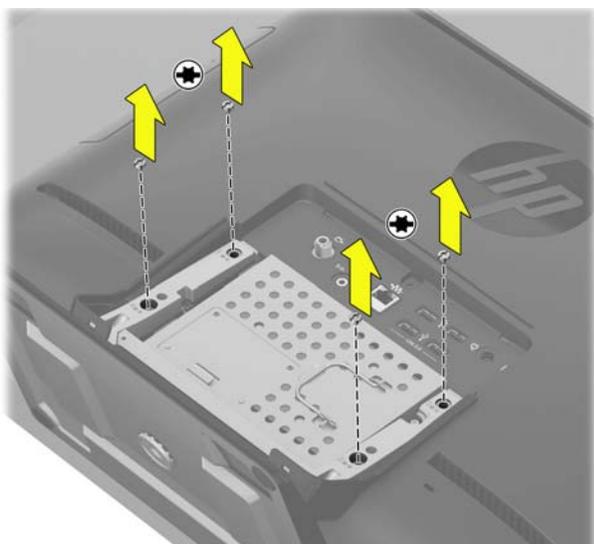
- 6 Use a flathead or Torx screwdriver to remove the screw that attaches the stand cover at the back of the computer.



- 7** Lift the bottom edges of the stand cover to remove it from the stand.



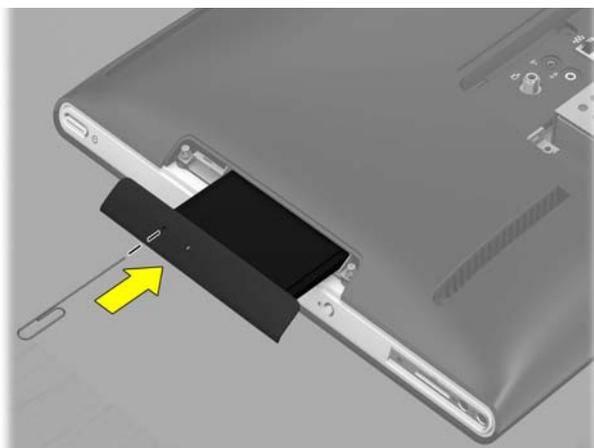
- 8** Remove the four screws that attach the stand to the back of the computer, using a flathead or Torx screwdriver.



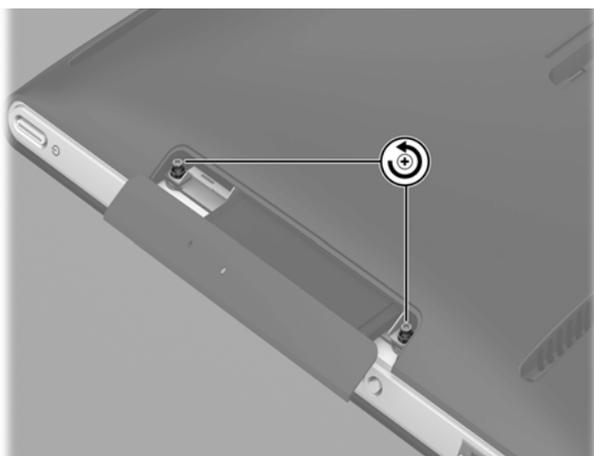
- 9** Lift the stand to remove it from the computer.



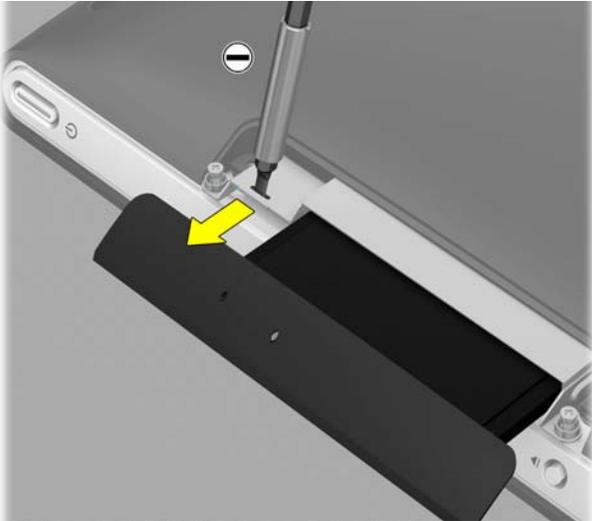
- 10** Insert a large paper clip into the hole on the CD/DVD drive cover to release the CD/DVD drive tray.



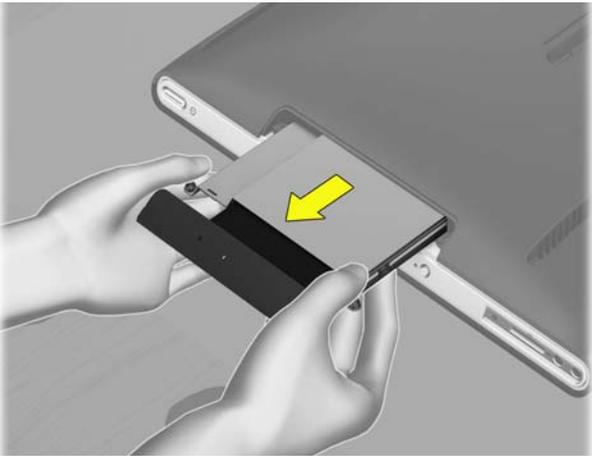
- 11** Pull the CD/DVD drive tray out slightly and use a #1 Phillips screwdriver to loosen the two captive screws.



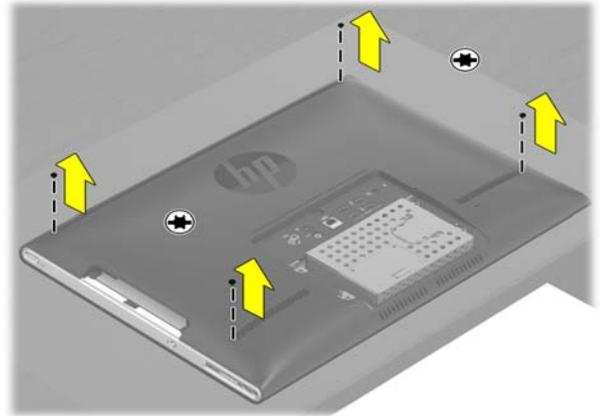
12 Insert a flathead screwdriver into the slot to gently push out the CD/DVD tray.



13 Remove the CD/DVD drive tray from the computer.



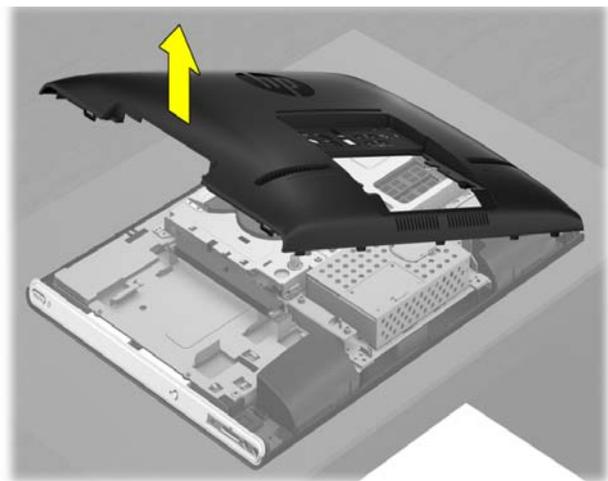
14 Remove the four screws from the back cover.



15 Insert your fingers into the CD/DVD Drive slot to lift the back cover off the computer.



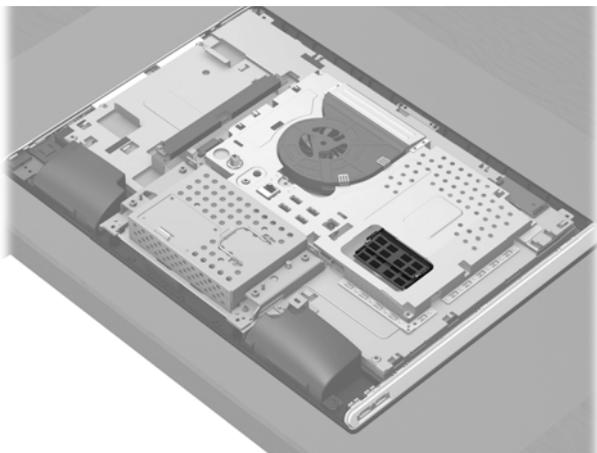
16 Remove the back cover.



CAUTION: Be sure to push out the entire CD/DVD drive tray. Do not pull out the CD/DVD drive so that it is exposed. Touching the CD/DVD drive could damage it.

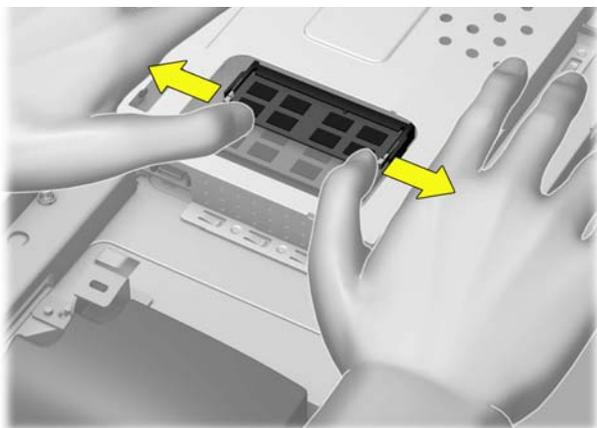


17 Locate the memory cards on the back of the computer.

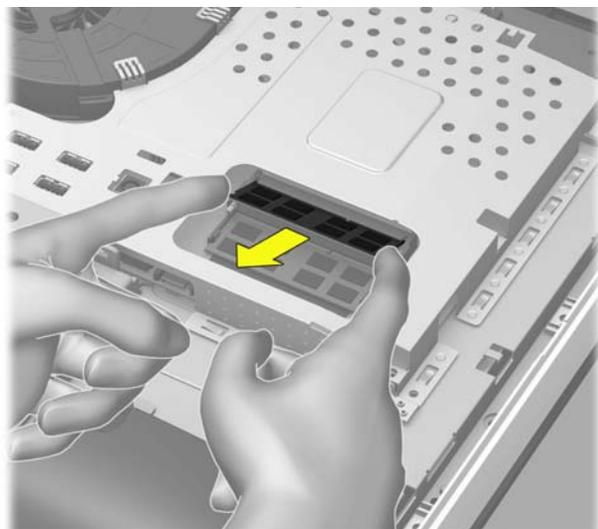


IMPORTANT: If you are removing both cards, you must remove the upper one before removing the lower one.

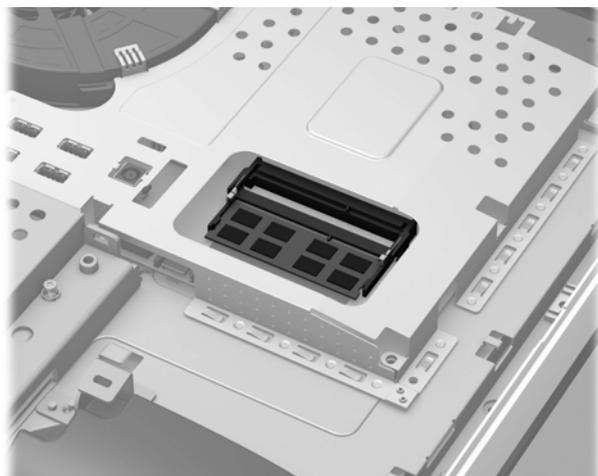
18 Use your fingers to press outwards on the retaining clips at the left and right sides of the top memory card to release it.



19 Holding the memory card by its edges, remove it from the compartment.



20 If you need to remove the lower memory card, repeat steps 19 and 20.

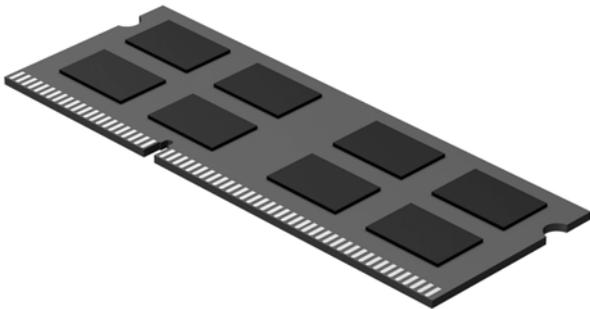


Installing a New Memory Card

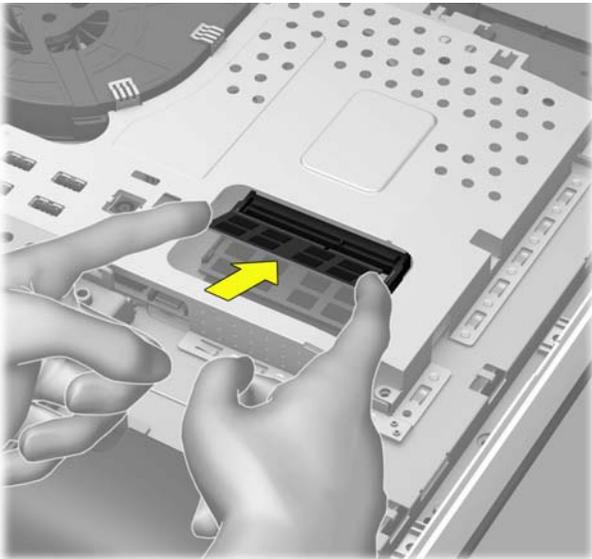
NOTE: The replacement memory card may not look exactly the same as the original drive due to different manufacturers or models. Hewlett-Packard always provides quality parts that meet or exceed your original computer specifications.

IMPORTANT: If you are replacing both cards, you must replace the lower one before replacing the upper one.

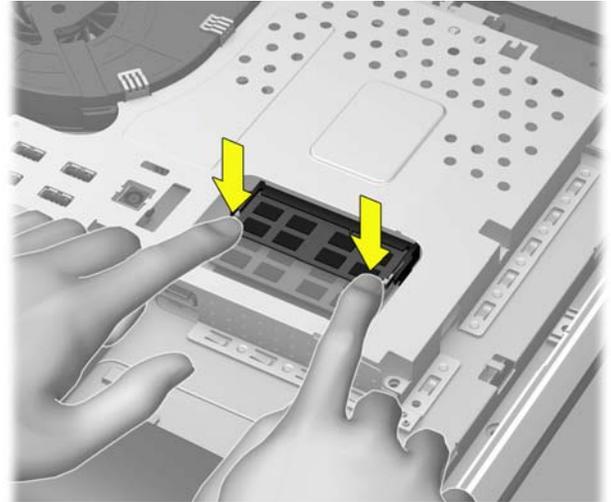
- 1 Orient the new memory card so that the notch on the edge of the card faces forward and is on the right.



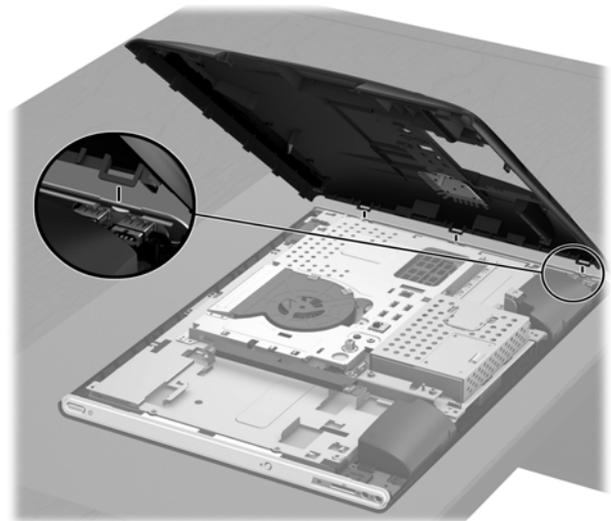
- 2 Holding the card by its edges, slide it all the way into the slot.



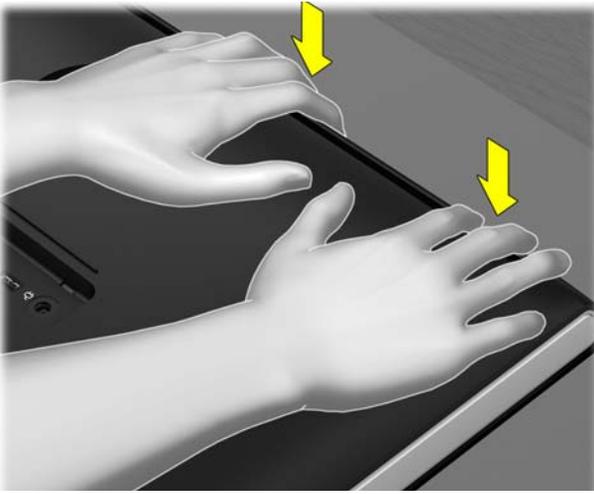
- 3 Make sure the card is pressed all the way into the socket and then gently push down on the card to snap it into place.



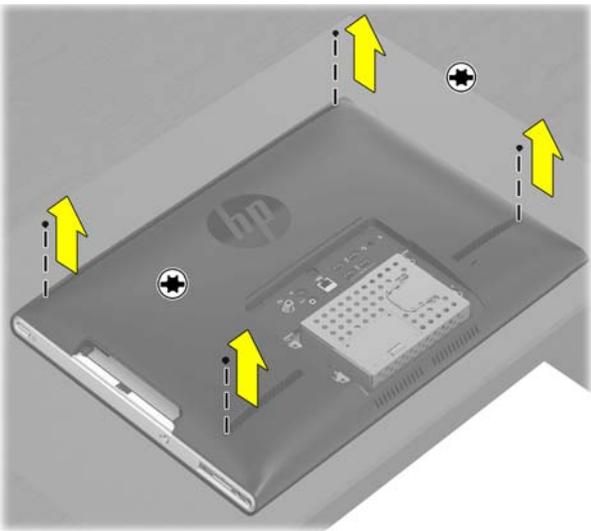
- 4 If you are replacing both memory cards, repeat steps 2 and 3 with the second card.
- 5 Align the slots on the side of the back cover with the notches on the right side of the face-down computer.



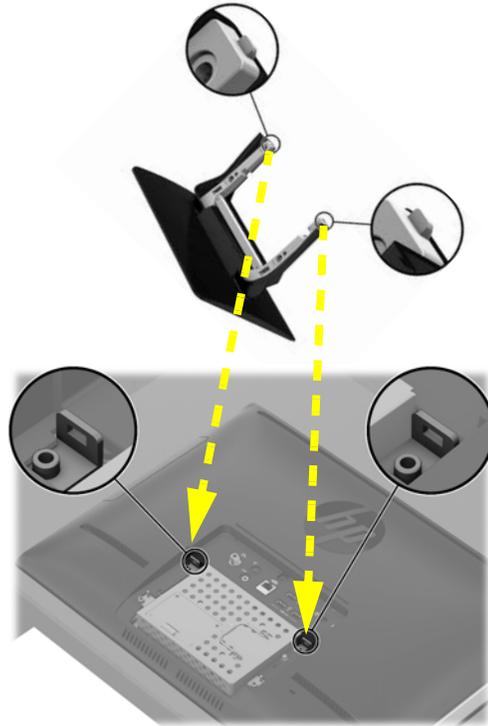
- 6 Replace the back cover, snapping it into place. Press all the way around the computer, making sure there are no gaps between the back cover and the computer.



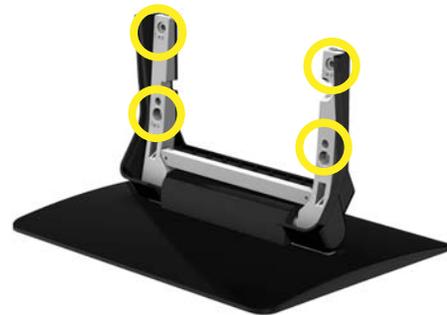
- 7 Replace the four screws on the back cover.



- 8 When replacing the stand, insert the two small hooks on the stand into the slots at the back of the computer.



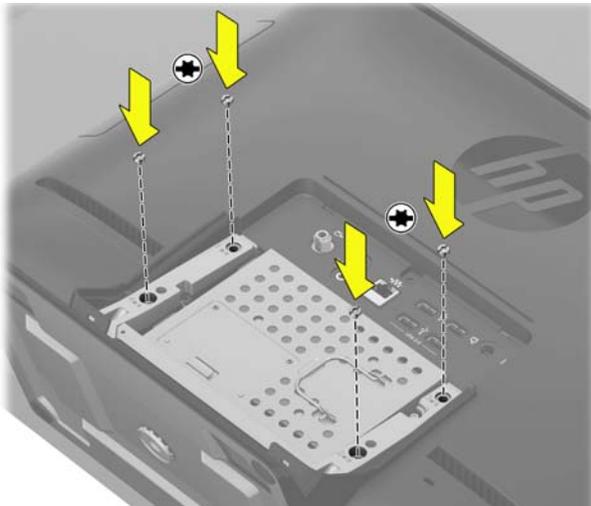
- 9 Make sure the screw holes on the stand align with the screw holes on the back of the computer.



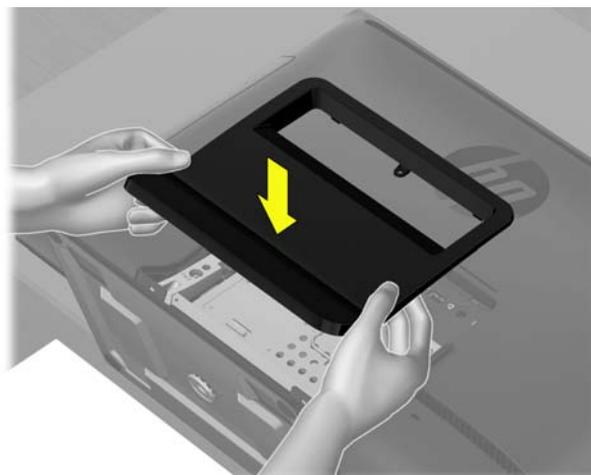
10 Replace the stand.



11 Use a flathead or Torx screwdriver to replace the four screws on the stand.



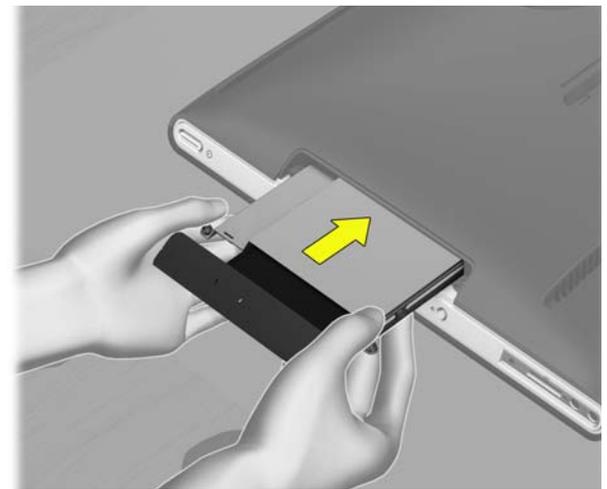
12 Replace the stand cover on the stand at the back of the computer.



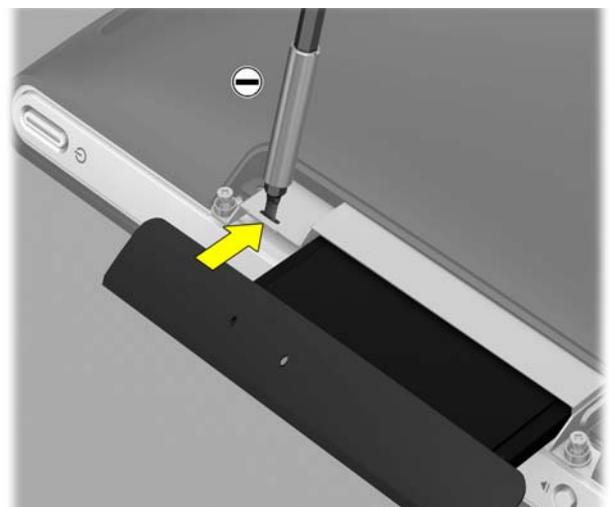
13 Tighten the screw that secures the stand cover to the back of the computer.



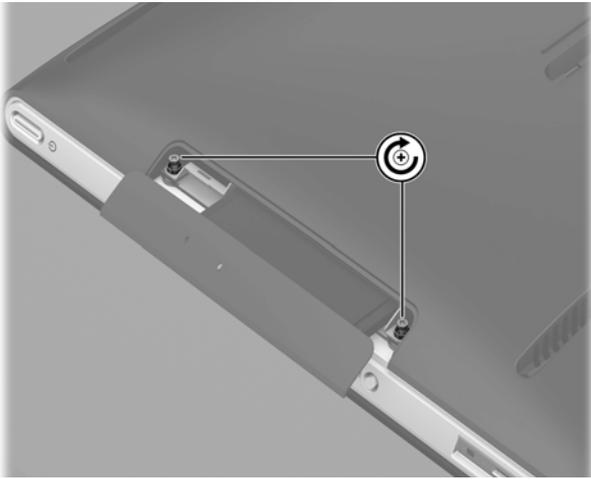
14 Slide the CD/DVD drive assembly partially into the computer.



15 Insert a flathead screwdriver into the slot to push the CD/DVD drive in further.



16 Tighten the two captive screws.



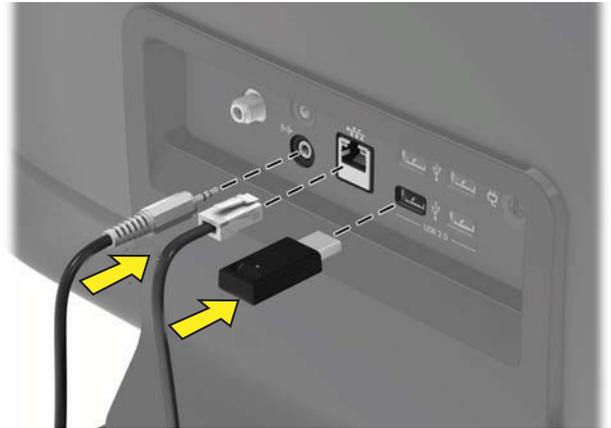
17 Push the CD/DVD drive all the way in until the bezel on the tray is flush with the side of the computer.



18 Place the computer in an upright position.



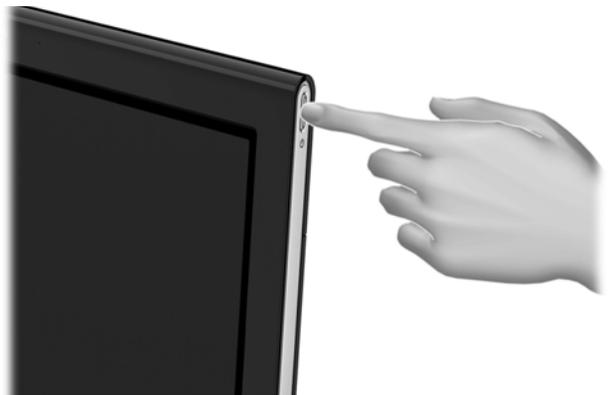
19 Reconnect all the cables.



20 Plug in the power cord.



21 Press the power button to turn on the computer.



TASK COMPLETED

Troubleshooting

If the computer displays a memory error after you have turned it back on, turn the computer off and unplug the power cord, then open up the memory compartment and make sure the memory card is firmly seated. To install it correctly, make sure it inserted all the way into the compartment and then push down on it to snap it into place.



Removing and replacing a Computer Stand



HP TouchSmart³¹⁰

Computer features may vary by model.

Before You Begin

Observe the following requirements before removing and replacing the stand.



WARNING:

- **Never open the cover with the power cord attached or power applied. You may damage your computer.**
- **Avoid touching sharp edges inside the computer.**



CAUTION: Static electricity can damage the electronic components inside the computer. Discharge static electricity by touching the metal cage of the computer before touching any internal parts or electronic components.

Tools Needed

- Flathead/Torx screwdriver #15

Small screws are easily lost. Remove screws over a surface that allows you to retrieve them if they fall.

Removing and Replacing a Computer Stand



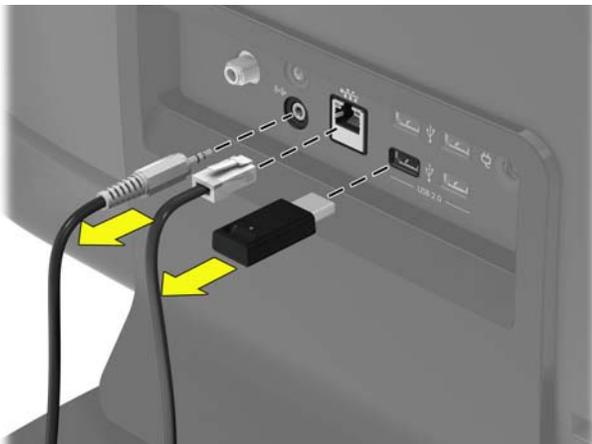
5-10 minutes

Removing the Stand

- 1 Remove items such as CDs, DVDs, and USB storage devices from the computer.
- 2 Close all open programs and shut down your operating system.
- 3 Unplug the computer by disconnecting the power cord in back.



- 4 Unplug all attached cables from the back of the computer.



- 5 Lay the computer down on a flat surface, covered with a soft cloth to protect the screen from scratches or other damage.



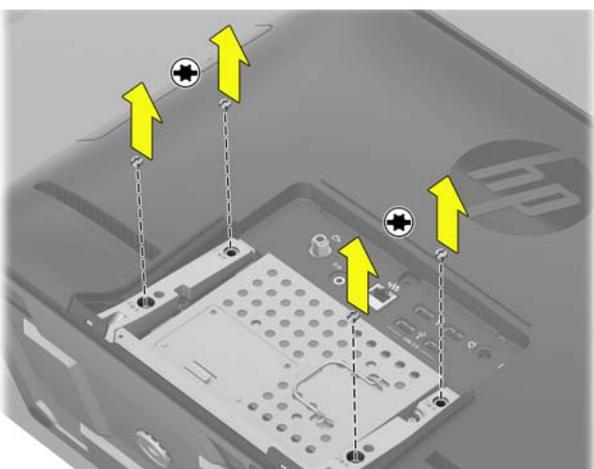
- 6 Use a flathead or Torx screwdriver to remove the screw that attaches the stand cover to the stand.



- 7 Lift the edges of the stand cover to remove it from the stand.



- 8 Use a flathead or Torx screwdriver to remove the four screws that attach the stand to the back of the computer.

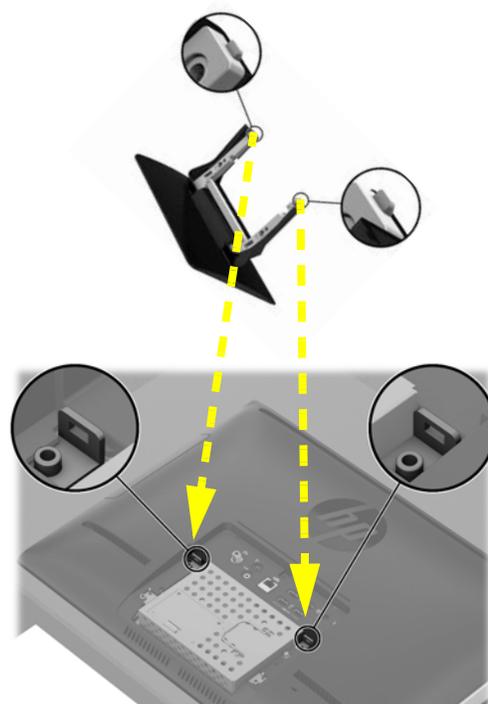


- 9 Lift the stand to remove it from the computer.

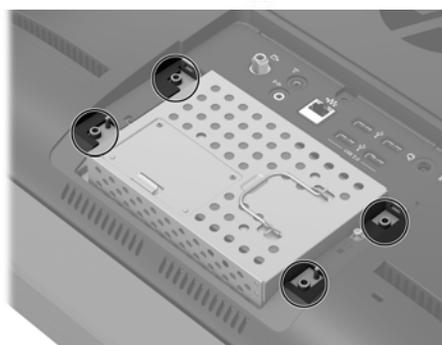
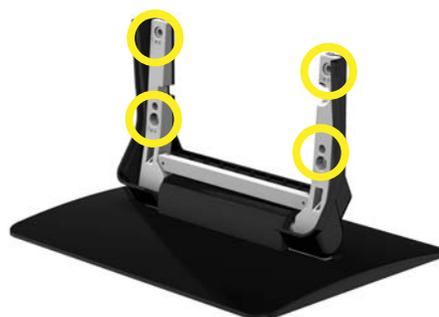


Installing a New Stand

- 1 When replacing the stand, insert the two small hooks on the stand into the slots at the back of the computer.



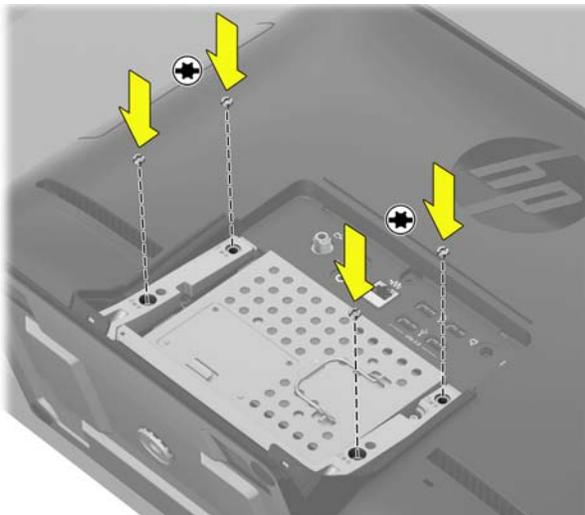
- 2 Make sure the screw holes on the stand align with the screw holes on the back of the computer.



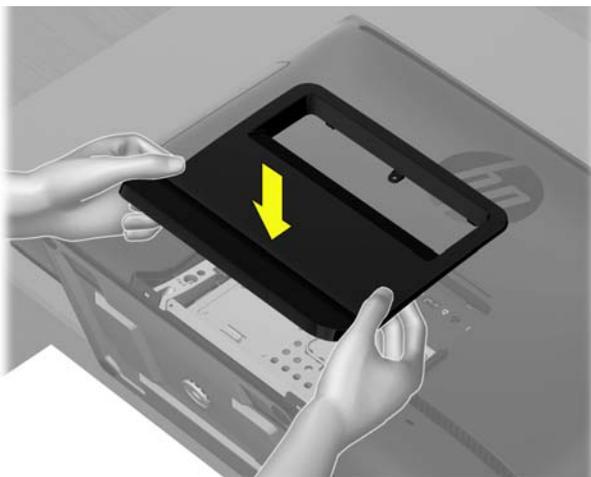
3 Replace the stand.



4 Use a flathead or Torx screwdriver to replace the four screws on the stand.



5 Replace the stand cover on the stand at the back of the computer.



6 Tighten the screw that secures the stand cover to the back of the computer.



7 Place the computer in an upright position.



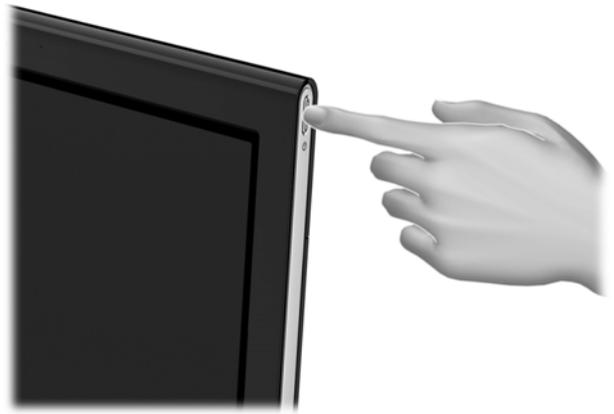
8 Reconnect all the cables.



9 Plug in the power cord.



10 Press the power button to turn on the computer.



TASK COMPLETED