ELECTRIC CIRCUITS 7TH EDITION SOLUTIONS MANUAL

Download Complete File

How do you solve electric circuit problems?

What is electric circuit class 7 short answer? An electric circuit is the continuous closed path along which current flows from the positive terminal to the negative terminal of the battery. Construction of a circuit: An electric circuit consists of a cell or a battery, connecting wires, a bulb, and a switch.

How to make an electric circuit class 7?

What is electric circuit class 6? An electrical circuit is a closed path of wires and electrical components which allows a current through it on the application of potential difference between two points in the path. An electric circuit consists of electric devices, a source of electricity and wires that are connected with the help of a switch

What are the 10 common electrical problems and solutions?

How to solve numericals of electricity?

How to explain an electric circuit? electric circuit, path for transmitting electric current. An electric circuit includes a device that gives energy to the charged particles constituting the current, such as a battery or a generator; devices that use current, such as lamps, electric motors, or computers; and the connecting wires or transmission lines.

What is fuse class 7? A fuse is a service that delivers usable electrical circuit overcurrent safety. Some of the main fuse functions are as follows: Acts as a barrier between both the human body and the electric circuit. Inhibits system failure due to defective operation of circuits.

What is electricity grade 7? Electricity is the flow of tiny particles called electrons and protons. Every time you switch on a light, electrons, and protons are traveling through wires and into lightbulbs, resulting in lights being turned on.

How do you fix a circuit problem?

How can we solve electric power problems? $P = I \ V = I \ (IR) = I2R$. This gives the power in terms of only the current and the resistance. Thus, by combining Ohm's law with the equation $P = I \ V \ P = I \ V$ for electric power, we obtain two more expressions for power: one in terms of voltage and resistance and one in terms of current and resistance.

How do you solve for the power of an electrical circuit? The electric power is given by P = VI, where V is the potential difference, I is the electric current and P is the electric power.

How do you solve for current in a circuit? If the voltage (V) and resistance (R) of any circuit is given we can use the electric current formula to calculate the current, i.e., I = V/R (amps).

What type of engine is in an Iveco truck? Stralis trucks and tractors are powered by the straight six Cursor 8 and Cursor 10 engines. The Cursor 8 has three power outputs: 273 Hp (200 kW), 310 Hp (228 kW) and 350 Hp (259 kW). The Cursor 10 comes in two versions: 400 Hp (294 kW) and 430 Hp (316 kW).

Which is the best Iveco engine? The 2.3-litre diesel engine is our favourite – Iveco offers it in 116bhp, 136bhp and 156bhp forms. The entry-level 116bhp version is certainly adequate, but its peak torque arrives a lot later than the other two units. Instead we would suggest the mid-range 136bhp option as our pick over the more powerful 156bhp model.

What engines do Iveco Vans use?

Are Iveco and Fiat engines the same? In 2004, the Iveco Motors brand was introduced, which became an umbrella for the production of engines; the following

ELECTRIC CIRCUITS 7TH EDITION SOLUTIONS MANUAL

year, it was incorporated into the newly founded Fiat Powertrain Technologies.

Do Iveco make their own engines? Iveco Motors is one of the few engine manufacturers worldwide that can count on a complete range of units spanning a power output from 40 to 1765 kW, suitable for all types of application fields: vehicle, agricultural, industrial, marine, railway and power generation.

Do Ford own Iveco? 1975 - Foundation of the Iveco company. 1980 - Magirus Deutz sells its remaining share in Iveco (18%) to Fiat, and Iveco becomes a 100% subsidiary of Fiat SpA. 1986 - Purchase of the Ford UK Truck Division. Iveco takes over the Astra company of Piacenza, which manufactures construction site and dumper trucks.

Are Iveco diesel engines good? The 136hp output of the diesel engine is more than adequate in the majority of situations. Even with a hefty load on board, it'll sit at 70mph all day long with no drop in speed on the inclines we encountered.

How long do Iveco engines last? What is Iveco Daily lifespan? The estimated lifespan of a Iveco Daily is 268,000mi, before reaching the life expectancy upper limit. Fuel type is a major factor when looking into a vehicles lifespan/life expectancy.

Is Iveco a reliable truck? The Iveco Daily has a great reputation for being overengineered by a company that's used to producing HGVs. A relatively small dealer network in the UK versus those of Ford and Mercedes may put some buyers off, but the Daily's good reputation for reliability through its various generations bodes well.

What are the common faults of the Iveco Daily?

Does IVECO own Cummins? The IVECO was a joint Cummins Fiat engine - now all is owned by Fiat - Fiat traded cummins out of their interest for Cases interest in the CDC engine in the USA.

Who owns IVECO?

Is Iveco made in China? In China, Iveco Group has been active for almost four decades and today operates through various brands, including IVECO, FPT Industrial, ASTRA and MAGIRUS, with 2 R&D centres in Chongqing and Shanghai and 3 manufacturing bases, the FPT Industrial After Treatment System plant and the

ELECTRIC CIRCUITS 7TH EDITION SOLUTIONS MANUAL

joint ventures SFH and NAVECO.

Is Iveco better than Sprinter? Iveco Daily vs Mercedes Sprinter: Verdict Well, it was a tough contest but the Iveco Daily takes the win. The Daily features more modern engines, can haul more, consumes way less fuel, is better for offroad driving and is more reliable. These factors make it one of the best camper vans.

Who are competitors to Iveco?

What engine is in an Iveco? Stralis tractors and trucks are all fitted with Cursor 10 engines in two sizes – 400 HP (294 kW) and 430 HP (316 kW) – and Cursor 13 engines, 480 HP (353 kW) and 540 HP (397 kW). Both engines have high pressure direct injection. An overhead camshaft drives the single pump injectors.

Are Ivecos good? I would highly recommend the Iveco daily, comfortable, reliable great for a work vehicle, all mod cons in the cabin and a pleasure to own. Iveco service was second to none, we have had no issue with customer service at all in fact they go above and beyond any other manufacturers customer service.

How do you pronounce Iveco?

How reliable is an Iveco Daily? As a van driver you may be looking to buy a used van or suss out the various vans on finance options available. The Iveco Daily is a good choice no matter what your circumstance thanks to its robust, reliable and confident powertrain.

What is the MPG of the Iveco? 8) Iveco Daily E6 – 40.3mpg Given its ladder-frame construction and the inevitably hefty kerbweight that comes with it, efficiency is never going to be the Iveco Daily's strongest area. Nevertheless all 120hp 3.5t manual variants are officially rated at 40.3mpg, regardless of bodysize.

What engine is in a 2007 Iveco Daily? The Iveco Daily 2007 is available in Diesel. Engine sizes and transmissions vary from the Van 2.3L 6 SP Automatic to the Van 3.0L 6SP Manual. Interested in an Iveco Daily?

Is Iveco a Cummins? Diesel engine maker Cummins Inc. announced today that it has concluded its joint ventures with equipment manufacturer CNH Global N.V. (CNH) and Iveco N.V., which are both subsidiaries of the Italian Fiat Group.

Who makes Iveco diesel engines? Iveco Diesel Engines. Since its inception in 1975, FPT (formerly Iveco Motors) has been responsible for upholding the Fiat tradition in the field of the diesel engine - a tradition that extends back over 90 years to the very first Fiat-made diesel.

Who builds the best diesel engine? Detroit Diesel Engines Detroit Diesel is a maker of only diesel engines, and its three primary models are the DD13, DD15, and DD16. The DD15 is often regarded as the best Engine and is widely used by truck manufacturers.

Are Iveco engines reliable? We were the UK distributor for Fiat-Hitachi Excavators, the Iveco engines were extremely reliable in excavators and trucks, furthermore, if they did go wrong they were low cost to repair.

Is Iveco made by Fiat? IVECO was established as the result of the merger of five truck brands within the Fiat Group: Fiat, OM and Lancia of Italy, Unic of France and Magirus Deutz of Germany.

What is the longest lasting engine made? Toyota's 22R engine is often hailed as one of the most robust and long-lasting engines ever produced. Introduced in the late 1970s, it powered various Toyota models for decades. Owners have reported these engines regularly exceeding 300,000 miles, and some even reaching half a million miles with proper maintenance.

Is IVECO a Cummins? Diesel engine maker Cummins Inc. announced today that it has concluded its joint ventures with equipment manufacturer CNH Global N.V. (CNH) and Iveco N.V., which are both subsidiaries of the Italian Fiat Group.

Are IVECO trucks reliable? There is no doubt, the IVECO S-Way is a good truck. It's well built, has a great engine and trannie and will happily haul a load. All IVECO Australia has to do is let people know it's out there.

Are IVECO any good? The Iveco Daily has a great reputation for being overengineered by a company that's used to producing HGVs. A relatively small dealer network in the UK versus those of Ford and Mercedes may put some buyers off, but the Daily's good reputation for reliability through its various generations bodes well. **Is IVECO better than Mercedes?** Iveco Daily vs Mercedes Sprinter: Verdict Well, it was a tough contest but the Iveco Daily takes the win. The Daily features more modern engines, can haul more, consumes way less fuel, is better for offroad driving and is more reliable. These factors make it one of the best camper vans.

What trucks come with a Cummins engine? The Cummins 6.7L Turbo Diesel engine is available in RAM 2500 and 3500 Heavy-Duty pickup trucks and RAM 3500, 4500 and 5500 Chassis cabs. Approximately 75% of all RAM 2500 and 3500 Heavy-Duty pickup owners choose the optional Cummins Turbo Diesel.

What truck manufacturers use Cummins engines? Since Cummins is solely focused on producing engines, all major heavy-duty truck brands, including Freightliner, International, Kenworth, Mack, Peterbilt, Volvo, and Western Star, use Cummins diesel engines. The ISX15 and ISX12 are two diesel engines Cummins produces for heavy-duty vehicles.

What company owns Cummins engines? It's a common myth that Cummins is owned by auto manufacturers like Ford or Chrysler. In fact, Cummins Turbo Technologies is an independent company that manufactures and markets a complete line of diesel and natural gas-powered engines.

Are Iveco engines reliable? We were the UK distributor for Fiat-Hitachi Excavators, the Iveco engines were extremely reliable in excavators and trucks, furthermore, if they did go wrong they were low cost to repair.

What are the common faults of the Iveco Daily?

What engine is in an Iveco? Stralis tractors and trucks are all fitted with Cursor 10 engines in two sizes – 400 HP (294 kW) and 430 HP (316 kW) – and Cursor 13 engines, 480 HP (353 kW) and 540 HP (397 kW). Both engines have high pressure direct injection. An overhead camshaft drives the single pump injectors.

Did Ford own IVECO? IVECO is set to buy the remaining 15.2% of the share capital held by Ford in June. The sale will end the 17-year-old link between Iveco and Ford. Iveco Ford Truck Ltd will change its name to Iveco Ltd and stop using the Ford trademark. This will allow the company to re-brand itself and its dealers in the UK.

Who builds IVECO? Iveco, an acronym for Industrial Vehicles Corporation, is an Italian industrial vehicle and bus manufacturing company based in Turin, Italy and owned by CNH Industrial Group.

Who makes IVECO diesel engines? Iveco Diesel Engines. Since its inception in 1975, FPT (formerly Iveco Motors) has been responsible for upholding the Fiat tradition in the field of the diesel engine - a tradition that extends back over 90 years to the very first Fiat-made diesel.

Is Iveco made in China? In China, Iveco Group has been active for almost four decades and today operates through various brands, including IVECO, FPT Industrial, ASTRA and MAGIRUS, with 2 R&D centres in Chongqing and Shanghai and 3 manufacturing bases, the FPT Industrial After Treatment System plant and the joint ventures SFH and NAVECO.

Who owns Iveco?

Is Iveco made by Fiat? IVECO was established as the result of the merger of five truck brands within the Fiat Group: Fiat, OM and Lancia of Italy, Unic of France and Magirus Deutz of Germany.

Wish You Were Here: A Guide to Baltimore City for Natives and Newcomers

Baltimore City, nestled on the Chesapeake Bay, is a vibrant and diverse metropolis with a rich history and culture. Whether you're a native or a newcomer, there's always something new to discover in this captivating city.

Q: What are some must-visit attractions for Baltimore newcomers?

A: The Inner Harbor is a quintessential Baltimore destination, with its bustling waterfront promenade, shops, and restaurants. For history enthusiasts, Fort McHenry, the birthplace of the Star-Spangled Banner, is a must-see. The American Visionary Art Museum showcases a stunning collection of outsider art, while the Walters Art Museum boasts a diverse collection from ancient to modern times.

Q: Where can natives find hidden gems and off-the-beaten-path experiences?

A: For a glimpse into Baltimore's vibrant arts scene, explore the historic Station North Arts & Entertainment District. Hampden, known for its quirky shops and lively nightlife, is a great place to experience Baltimore's bohemian side. And don't miss the Baltimore Farmers' Market & Bazaar for an authentic taste of local produce, crafts, and food.

Q: What are some unique dining experiences that reflect Baltimore's culinary culture?

A: Baltimore is known for its crab cakes, and no visit is complete without sampling this local delicacy. The Boathouse Canton and Thames Street Oyster House are among the best places to enjoy fresh seafood. For a taste of authentic Baltimore cuisine, try pit beef from one of the city's many barbecue joints, such as Chaps Pit Beef or Beefalo Bob's.

Q: How can visitors get around Baltimore City efficiently?

A: The Baltimore Light RailLink is a convenient way to explore the city's major attractions. The Charm City Circulator bus service provides free rides within the downtown area. For those who prefer to explore by foot, Baltimore has a walkable downtown and many charming neighborhoods.

Q: What makes Baltimore City a special place for natives and newcomers alike?

A: Baltimore City has a unique charm that stems from its rich history, diverse population, and vibrant arts and culture scene. It's a city that embraces its heritage while looking toward the future, making it a welcoming and exciting place for both locals and visitors to call home.

How to make a hovercraft project?

How much to build a hovercraft? Step 1: TOOLS AND MATERIALS LIST. Total cost of the project was around \$600 plus the cost of a new or used motor.

What is the design concept of the hovercraft? Hovercraft use blowers to produce a large volume of air below the hull, or air cushion, that is slightly above atmospheric

pressure. The pressure difference between the higher-pressure air below the hull and lower pressure ambient air above it produces lift, which causes the hull to float above the running surface.

What is the methodology of hovercraft? Hovercraft utilizes blowers to deliver a large volume of air underneath the frame that is somewhat above air weight. The weight distinction between the higher pressure air underneath the frame and lower weight encompassing air Page 16 16 above it produces lift, which causes the body to skim over the running surface.

What are the 3 main components of a hovercraft? A conventional hovercraft has three main components: A platform, a motorized fan, and a skirt. The fan blows air underneath the platform, where it is trapped between the platform and the ground by the skirt.

Why did hovercraft fail? All ended in ignominy because the technology just wasn't durable enough, and the machines were noisy and expensive. It wasn't until the launching of the Hovertravel route across the Solent, between Ryde and Southsea, in 1965, that the commercial hovercraft began to work.

Why aren t hovercraft used anymore? First, the fuel costs were prohibitive. The vehicle's four Rolls-Royce engines consumed 1,200 gallons of fuel per hour. That was fine during the 1950s and 1960s, when fuel was very cheap, but the costs became more burdensome. The Neoprene skirt that encircled the craft created another problem.

Are hovercrafts street legal? No. Hovercraft come under U.S. Coast Guard jurisdiction.

How much does a 2 man hovercraft cost? The Two Person 60 MPH Hovercraft from Hammacher Schlemmer (\$14,000) features a 60-horsepower, two-cylinder gasoline engine and a 12-Volt battery to keep things running, along with an electric starter, 16" windshield, six gallon fuel tank, and two aluminum skid rails on the bottom hull.

What is one disadvantage of using a hovercraft? Hovercraft cannot operate on steep slopes. Like aircraft they require a degree of inspection and maintenance,

ideally stored under cover away from climatic extremes.

What is the basic structure of a hovercraft? Hovercraft use a fan to maintain pressure under side skirts to hover above the water surface, and air propellers to provide thrust for propulsion. The ratio of power required for propulsion to that for hovering is between 5:1 and 10:1. These vessels are designed for high speed.

What materials are used to make a hovercraft? To build a simple hovercraft at home capable of carrying one person sitting inside, you would typically need materials like plywood for the base, a large tarp or heavy-duty plastic sheet for the skirt, a leaf blower or small engine for air propulsion, and some basic hardware for assembly.

How to make a model of a hovercraft?

What is the difference between a hovercraft and a hydrofoil? Hovercraft is an amphibious boat that use giant fan to travel over land or water. But hydrofoil is a boat that use underwater wing to travel over the water and makes the boat fly.

How is a hovercraft built? Hovercraft or Air Cushion Vehicles ACV's work by creating pressurized air between the hull above, the water or ground below, and a flexible skirt around the perimeter to create lift. The lift fan creates a lens of air that escapes between the skirt and the surface to reduce friction.

What are the principles of hovercraft design? Hovercrafts work on two main principles: lift and propulsion. A fan blows air straight down underneath the vehicle. A skirt—a piece of material fastened around the bottom edge of the base of the vehicle—traps the air between the vehicle and the ground or water.

How to make a hovercraft go straight? If one side is heavy, the hovercraft will go in circles. TIP: This is fun too, but if you want your hovercraft to go straight, make sure the weight above is distributed evenly. TIP: If the ride is too short... Slow the flow of air through the straw—or try a bigger balloon.

What is the physics behind a hovercraft?

Why is hovercraft not so popular? The limiting drawbacks of commercial hovercraft are: they are very vulnerable to being blown off course by strong winds,

ELECTRIC CIRCUITS 7TH EDITION SOLUTIONS MANUAL

and so cannot be operated during such winds. they are very noisey, which limits their use on roads. their fuel consumption is much higher than a train or a ship.

Why were hovercrafts discontinued? The cross-Channel service from Dover to Calais closed in 2000. The two vessels, the Princess Anne and the Princess Margaret, could carry only 52 cars. Larger ferries and cheaper-to-power catamarans, as well as the Channel Tunnel, proved too much competition. Routes in Japan and Sierra Leone have also since ceased.

Does anyone still make hovercraft? BHC - the world's largest manufacturer of recreational & light commercial hovercraft, exporting into 40+ countries across the globe. Our hovercraft have been developed & refined over the course of more than 30 years, producing up to 100 quality, hand-built craft each year.

Does the US military still use hovercrafts? The Landing Craft Air Cushion (LCAC) is a class of air-cushioned landing craft (hovercraft) used by the United States Navy and the Japan Maritime Self-Defense Force (JMSDF).

Can you still get a hovercraft? The Isle of Wight Hovercraft is the world's only year-round scheduled (timetabled) passenger hovercraft service.

What is the largest hovercraft ever made? N4 WAS THE LARGEST CIVILIAN HOVERCRAFT EVER BUILT – AND IT CAME FROM EAST COWES. The Saunders-Roe Nautical 4 hovercraft – more commonly known as the SR. N4 – provided a cross-Channel service between 1968 and 2000 and even featured in the James Bond film Diamonds are Forever.

What is the quietest hovercraft? Neoteric Recreational Hovercraft are the lightest and quietest production hovercraft in the industry.

Can a hovercraft capsize? In an extreme emergency stop situation where other methods either fail or are unsuitable, a hovercraft might be spun around and full thrust applied against the direction of travel, although this is a dangerous manoeuvre for larger craft which can lead to capsizing and is unlikely to ever be necessary given safer ...

What is the most efficient hovercraft? Neoteric hovercraft are so efficient that they can achieve a speed of greater than 25 mph (40 km/h) in reverse and are the only ELECTRIC CIRCUITS 7TH EDITION SOLUTIONS MANUAL

hovercraft in the world that can accelerate over hump in reverse. With a digital microprocessor developed exclusively for Neoteric, our hovercraft use a fly-by-wire reverse thrust system.

How to make a hoverboard for a school project?

How to make a hovercraft out of paper?

Are hovercrafts street legal? No. Hovercraft come under U.S. Coast Guard jurisdiction.

What materials are used to make a hovercraft? To build a simple hovercraft at home capable of carrying one person sitting inside, you would typically need materials like plywood for the base, a large tarp or heavy-duty plastic sheet for the skirt, a leaf blower or small engine for air propulsion, and some basic hardware for assembly.

Can a 13 year old ride a hoverboard? Hoverboards that are 9 inches have a maximum weight capacity of 100 kg. This size is recommended for ages above 10 years old. Moreover, this size is also safe for adults. A single charge of 2-3 hours can travel up to 20 km, with max speed of 10-15 km/h.

How to make an anti gravity hoverboard? Scientists have looked into how to make a real hoverboard that floats and have concluded that to do this, you'd need to create a magnetic field that generates electricity on the ground/surface. The magnetic field and the electric currents repel one another, which enables the hoverboard to float above the surface.

Do floating hoverboards exist?

How to make a model of a hovercraft?

How to build a CD hovercraft?

How to draw a hovercraft?

Why were Hovercrafts discontinued? The cross-Channel service from Dover to Calais closed in 2000. The two vessels, the Princess Anne and the Princess Margaret, could carry only 52 cars. Larger ferries and cheaper-to-power catamarans, ELECTRIC CIRCUITS 7TH EDITION SOLUTIONS MANUAL

as well as the Channel Tunnel, proved too much competition. Routes in Japan and Sierra Leone have also since ceased.

Why aren t hovercrafts more popular? First, the fuel costs were prohibitive. The vehicle's four Rolls-Royce engines consumed 1,200 gallons of fuel per hour. That was fine during the 1950s and 1960s, when fuel was very cheap, but the costs became more burdensome. The Neoprene skirt that encircled the craft created another problem.

What is the quietest hovercraft? Neoteric Recreational Hovercraft are the lightest and quietest production hovercraft in the industry.

What are the disadvantages of hovercraft? Hovercraft are limited to carry a certain payload depending on their size to ensure effective hover. Their weight must be balanced for effective mobility and control. High winds and heavy sea states have an unfavourable effect on performance. Hovercraft cannot operate on steep slopes.

What are the principles of hovercraft design? Hovercrafts work on two main principles: lift and propulsion. A fan blows air straight down underneath the vehicle. A skirt—a piece of material fastened around the bottom edge of the base of the vehicle—traps the air between the vehicle and the ground or water.

What is the difference between a hydrofoil and a hovercraft? A hovercraft flies on a cushion of higher-pressure air underneath it. A hydrofoil does fly on wings, but the wings are embedded in water rather than in air.

iveco 8065 series engine, wish you were here a to baltimore city for natives and newcomers, how to build design a hovercraft guide

holt physics current and resistance guide anatomy of a divorce dying is not an option nor is insanity theatre brief version 10th edition the lost years of jesus biological psychology calculus by howard anton 6th edition new holland kobelco e135b crawler excavator service repair factory manual instant download polaris 300 4x4 service manual nissan xterra 2000 official workshop repair service manual nurses and families a guide to family assessment and intervention introduction to financial planning module 1 pomodoro technique illustrated pragmatic life honda rancher ELECTRIC CIRCUITS 7TH EDITION SOLUTIONS MANUAL

trx350te manual engineering analysis with solidworks simulation 2015 skunk scout novel study guide schindler 330a elevator repair manual gods doodle the life and times of the penis chevrolet chevette and pointiac t1000 automotive repair manual freightliner argosy workshop manual sample student growth objectives wayne vista cng dispenser manual essentials of oceanography 10th edition online evidence based social work a critical stance engine city engines of light general chemistry annotated instructors edition 4th edition kipor gs2000 service manual 42rle transmission manual

tomosmoped workshopmanual macroeconomicsmcconnell 20theditionyamaha manualtiltrelease masteringsql server2014 dataminingcolon polypsandthe prevention of colorectal cancer humanity amoral history of the twentieth century second editionnexxtech cdalarmclock radiomanual trickymathproblems andanswers hewlettpackardelitebook 6930pmanualpdr pharmacopoeiapocketdosing guide20077th edition2000ford focusrepairmanual freecooper form6instruction manualkaliganganews papertodaycarbide tippedpensseventeen talesof hardsciencefiction sonymanuala65 quickknitflower frenzy17mix matchknittedflowers annies 2001fordexplorer ownersmanual 451sarawak handbookkawasakizx7r ninjaservice manualrenault megane1 manualsfr ensingle caseresearch methodsforthe behavioraland healthsciences canterburytales answersheet2 2hpmercurymanual javascriptcomplete referencethomas powellthirdedition downloadnowvn1600 vulcanvn1600 classic2007 servicerepairworkshop manualthedigitization of cinematic visual effects hollywoods coming of agehardbackcommon differentialequations5th editionzill1972 fordfactoryrepair shopservice manualcd maverickranch wagonrancheroranchero 500rancherogt rancherosquire72 theupsideof irrationalitytheunexpected benefitsofdefying logicat workand athomesolution kibblemechanicssch 3unelsonchemistry 11answersthe sixsigma handbookthird editionbythomas pyzdekand paulkeller freeoracle appsr12 sourcingstudent guide