1. What does directly proportional mean? When one variable increases  2. What does inversely proportional mean? When one variable increases  3. Is the graph above inverse or direct? Explain.  1. What is the independent variable? The variable expression of the independent or anything.  4. What is the dependent variable? The variable explain.  5. What is the dependent variable? The variable explain.  6. What axis represents the independent variable? A caxis.  7. What axis represents the independent variable? A caxis.  8. In the graph above, what is the independent variable? A caxis.  9. In the graph above, what is the independent variable? A caxis.  10. Determine the measurements below in the following:  11. Identify the number of significant digits in each of the following measurements.  12. A company of the following:  12. A company of the following:  13. The mass of an object was recorded as 9.93 g. 9.90 g. and 10.02 g. using an electronic analytical balance. What is the average of these three masses expressed to the correct number of significant figures?	Name: Block: Unit 2: Measurements Study Guide
2. What does inversely proportional mean? When one variable increases the other variable and everages.  3. Is the graph above inverse or direct? Explain.  1. Inverse: temp increases pressure checreases  4. What is the independent variable? the variable that is the dependent variable? The variable that is the dependent variable? Nariable that is the dependent variable? Anxios  7. What axis represents the independent variable? Anxios  8. In the graph above, what is the independent variable? The variable that is the dependent variable? The variable that is the dependent variable? The variable that is the independent variable? The variable that is the operature of the variable that is the following:  10. Determine the measurements below in the following:  11. Identify the number of significant digits in each of the following measurements.  12. And the variable that is the independent variable? The variable that is the following calculations and round to the correct number of significant of significant digits in each of the following measurements.  12. And the variable that is the independent variable?  13. The mass of an object was recorded as 9.93 g. 9.90 g. and 10.02 g. using an electronic analytical balance. What is the average of these three masses expressed to the correct number of significant figures?	Temperature
2. What does inversely proportional mean? When one variable increases the other variable increases.  Inverse: temp increases Pressure decreases.  What is the independent variable? the variable that is not dependent on anything to changing.  S. What is the dependent variable? The variable that is rot dependent on anything anything that is fested; depends on the independent.  6. What axis represents the independent variable? Y - axis.  7. What axis represents the independent variable? Y - axis.  8. In the graph above, what is the independent variable? Pressure  10. Determine the measurements below in the following:  11. Identify the number of significant digits in each of the following measurements.  a. 520 mL  b. 0.012 ms  c. 6230 kg  d. 2.560 x 10 L  e. 10.002ns  f. 86451 Pa  10. Perform the following calculations and round-to the correct number of sig figs:  a. 0.3287 cm x 45.2 cm = 14.85 (4.9 an)  11. The mass of an object was recorded as 9.93 g, 9.90 g, and 10.02 g, using an electronic analytical balance. What is the average of these three masses expressed to the correct number of significant figures?	1. What does directly proportional mean? When one Variable increases the other
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Constant changing  5. What is the dependent variable?  Now (a ble that is +6sted) depends on the independent  6. What axis represents the independent variable? x - axis  7. What axis represents the dependent variable? y - axis  8. In the graph above, what is the dependent variable? the more rature  10. Determine the measurements below in the following:  11. Identify the number of significant digits in each of the following measurements.  a. 520 mL  b. 0.0120 ms  c. 6.230 kg  d. 2.560 x 16 L  e. 10.002ns  f. 8.6451 Pa  g. 0.0001cm  h. 108,000 s  3  10. Perform the following calculations and round to the correct number of sig figs:  a. 0.3287 cm x 45.2 cm =  4.85  (4.9 cm) <sup>2</sup> 11.2 mL  11.5 the mass of an object was recorded as 9.93 g, 9.90 g, and 10.02 g, using an electronic analytical balance. What is the average of these three masses expressed to the correct number of significant figures?	MVerse: temp weregies Occessive
11. Identify the number of significant digits in each of the following measurements.  a. 520 mL  b. 0.0120 ms  3 c. 6.230 kg  3 d. 2.560 x 18 L  4  e. 10.002ns  5 f. 6.6451 Pa  4 g. 0.0001cm  1 h. 108,000 s  3  10. Perform the following calculations and round to the correct number of sig figs:  a. 0.3287 cm x 45.2 cm = 14.85 (14.9 cm² d. 125.5 kg + 52.68 kg + 2.1kg = 180.3 kg  b. 52.88 g = 4.72   = (4.72 q m² d. 10.5 kg + 52.68 kg + 2.1kg = 180.3 kg  11. The mass of an object was recorded as 9.93 g, 9.90 g, and 10.02 g, using an electronic analytical balance. What is the average of these three masses expressed to the correct number of significant figures?	constant changing is not dependent on anything
11. Identify the number of significant digits in each of the following measurements.  a. $520 \text{ mL}$ b. $0.020 \text{ ms}$ c. $1.002 \text{ ms}$ c. $1.002 \text{ ms}$ d. $1.002 \text{ ms}$ f. $1.002 \text{ ms}$ d. $1.002 \text{ ms}$ e. $1.002 \text{ ms}$ f. $1.002 \text{ ms}$ g. $1.002 \text{ ms}$ d. $1.002 \text{ ms}$ f. $1.002 \text{ ms}$ d. $1.002 \text{ ms}$ g. $1.002 \text{ ms}$ d. $1.002 \text{ ms}$ g.	Nariable that is tested; depends on the independent  6. What axis represents the independent variable? $x - a \times is$ 7. What axis represents the dependent variable? $y - a \times is$ 8. In the graph above, what is the independent variable? temperature  9. In the graph above, what is the dependent variable? Dead of the second o
a. $520 \text{ mL}$ b. $6.0120 \text{ ms}$ c. $6.230 \text{ kg}$ d. $2.560 \times 10^6 \text{ L}$ e. $10.002 \text{ns}$ f. $8.6451 \text{ Pa}$ g. $6.0001 \text{ cm}$ l. h. $108,000 \text{ s}$ 3  10. Perform the following calculations and round to the correct number of sig figs:  a. $0.3287 \text{ cm} \times 45.2 \text{ cm} = \frac{ 4.85 }{ 4.90m^2 }$ d. $125.5 \text{ kg} + 52.68 \text{ kg} + 2.1 \text{kg} = \frac{ 80.38 }{ 80.3 }$ e. $\frac{333 \text{ m}}{ 11.2 \text{ mL}}$ e. $\frac{333 \text{ m}}{ 11.2 \text{ mL}}$ g. $\frac{333 \text{ m}}{ 11.2 \text{ mL}}$ f. $520 \text{ g} + 4500 + 5000 = \frac{ 00.20 \text{ g} }{ 11.7 \text{ m}}$ 11. The mass of an object was recorded as $9.93 \text{ g}$ , $9.90 \text{ g}$ , and $10.02 \text{ g}$ , using an electronic analytical balance. What is the average of these three masses expressed to the correct number of significant figures?	0 1 2 3 4 5 CM
10. Perform the following calculations and round to the correct number of sig figs:  a. $0.3287 \text{ cm} \times 45.2 \text{ cm} = \frac{ 4.85 }{ 4.90m ^2}$ b. $\frac{52.88 \text{ g}}{11.2 \text{ mL}} = \frac{4.72}{ 4.72 } = \frac{4.72 \text{ g}}{ 4.72 }$ e. $\frac{333 \text{ m}}{110 \text{ s}} = \frac{3.007}{ 3.0m ^2} = \frac{3.0 \text{ m/s}}{ 3.0m ^2}$ 11. The mass of an object was recorded as 9.93 g, 9.90 g, and 10.02 g, using an electronic analytical balance. What is the average of these three masses expressed to the correct number of significant figures?	
a. $0.3287 \text{ cm} \times 45.2 \text{ cm} = \frac{14.85}{4.72} = \frac{14.72}{4.72} = 14.$	·
b. $52.88  \mathrm{g} = 4.721 = 4.72  \mathrm{g}$ e. $333  \mathrm{m} = 3.007 = 3.0  \mathrm{m/s}$ 11.2 mL  110 s  c. $520  \mathrm{mm} \times 19.120  \mathrm{mm} = 9942 = 9900  \mathrm{mm}^2$ f. $520  \mathrm{g} + 4500 + 5000 = 10020  \mathrm{g}$ 11. The mass of an object was recorded as $9.93  \mathrm{g}$ , $9.90  \mathrm{g}$ , and $10.02  \mathrm{g}$ , using an electronic analytical balance. What is the average of these three masses expressed to the correct number of significant figures?	
11.2 mL  110 s  c. 520 mm x 19.120 mm = 9942 = 9900 mm  f. 520g + 4500 + 5000 = 10020g  11. The mass of an object was recorded as 9.93 g, 9.90 g, and 10.02 g, using an electronic analytical balance. What is the average of these three masses expressed to the correct number of significant figures?	a. 0.3287 cm x 45.2 cm = $14.85$ (4.90m) d. 125.5 kg + 52.68 kg + 2.1kg = $180.3$ kg
11. The mass of an object was recorded as 9.93 g, 9.90 g, and 10.02 g, using an electronic analytical balance. What is the average of these three masses expressed to the correct number of significant figures?	11.1
11. The mass of an object was recorded as 9.93 g, 9.90 g, and 10.02 g, using an electronic analytical balance. What is the average of these three masses expressed to the correct number of significant figures?	c. 520 mm x 19.120 mm = $9942 = 9900 \text{ mm}^2$ f. $520g + 4500 + 5000 = 10020a$
C C 2 a 1 C C C C C C C C C C C C C C C C C C	11. The mass of an object was recorded as 9.93 g, 9.90 g, and 10.02 g, using an electronic analytical balance. What is the
7.438 + 4.90 g + 10.028 = 29.859 /3= (9.959)	9.939 + 9.909 + $10.029 = 29.859/3 = 9.959$

12. Put these numbers into scientific notation  a. 0.0003240	
a. 00003240 3.240 x 10 b. 645309 6.453 x 10	
13. Describe Accuracy close/achieve goal or target	
14. Describe Precision Con Sistent	
Measurement 1: 5.2 g  Measurement 2: 5.4 g  Measurement 3: 3 g  Measurement 4: 2.45 g  These data show repeated measurements of the same object which has a known mass of 5.38 grams, Which measurement is most accurate? Measurement 2	
16. First measurement: 6.293 g Second measurement: 6.294 g Third measurement: 6.295 g	
A student obtained these data after measuring the mass of an object three different times. If the true value of the object's mass is 5.550 g, these data are best described as — Precise but not accurate	
17. Calculate the density of unknown metal. The mass is 3.100 g and the volume is 1.05 mL. * remember Sig	Fia
D= mass 3.100g = 2.95g unit	5
18. What, is the formula for calculating % error? $ \sqrt[9]{6 \text{ error}} = \frac{ \text{experimental} - \text{accepted} }{\text{accepted}} \times 100 $ 19. Calculate the percent error for question 17, when the actual density of the unknown metal is 2.70 g/mL. sig Fig. $ \frac{ 2.95 - 2.70 }{2.70} \times 100 = \frac{0.25}{2.70} \times 100 = 0.093 \times 100 = 9.35 $	mb as
20. Convert the following:	
a. 1 kilometer = 1000 m b. 1 centimeter = 0.01 m c. 1 millimeter = 0.001 m	
d. 1.25L = 1250 mL (£2340mm = 0.00.2340 km f. 42,32 mg = 4.232 cg	3
g. $950g = 0.950$ kg h. $0.025 m = 7.5$ cm i. $6542mL = 6.542$ L	
22. Lab based question: Calculate the density of the metal below. Volume of the metal was determined by water displacement.  Mass (g) Initial Volume Final Volume Volume  Sig FigS 23.432g 6.0 mL 8.2mL 2.2 mL	
D= mass = 23.4329 = (119 mL)	

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