Christ the Teacher Grade 8 Screener H1 Name\_\_\_\_\_\_\_\_\_KEY\_\_\_\_\_\_\_\_\_



How do you feel about Math? Circle one

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| 1) Write the value of the underlined digit.  62 421 384**Two million****2 million**If the student writes 2 000 000 ask them to read the number to you and/or write out the words | 2) Write the value of the underlined digit: 4.268451Don’t worry about hyphen**Four ten-thousandths** **4 ten-thousandths** **4/10 000** |
|  N6.1 *Place value* | N 7.2 Place value/decimal |
| 3) Circle all the numbers divisible by 3 135 65 355 54 9  | 4) All these numbers are divisible by what number?**5**15 45 90 10 125  |
| N 7.1 Divisibility rules | N 7.1 Divisibility rules |
| 5) Write the number 345 605 084 in expanded form.**300 000 000 + 40 000 000 + 5 000 000 + 600 000 + 5 000 + 80 + 4**If a student includes the zeros, like 00 000 for the ten thousands place or 000 for the hundreds place, you can have a conversation about that but don’t need to mark the answer wrong |
| N 6.1 *Representing Number* |
| 6) Write the number 2.3 billion in standard form2 300 000 000This question is out of the curriculum guide | 7) What is the greatest common factor of 48, 16 and 40?8 |
| N 6.1 *Representing Number* | N6.2 *Factors and Multiples* |
| 8) What is the least common multiple of 3,4, and 6? **12** (24, 72 are common multiples but not *least* common multiples) | 9) Circle all the prime numbers10 15 17 5 21 29 11  |
| N6.2 *Factors and Multiples* | N6.2 *Factors and Multiples* |
| 10) Use any method you like to write all the prime factors of 36 | 11) Calculate$$10÷2+3×(9-2)=$$ |
| N6.2 *Factors and Multiples* | N 6.3 *Order of Operations* |
| 12) Calculate $12-0.5×1.2=$ | 13) Express as an improper fraction  7/3  |
| N 7.2 *Order of Operations, decimals* | N6.7 *Fractions* |
| 14) Change to a mixed number  $2\frac{2}{3}$  | 15) Write as an improper fraction (common fraction)   $\frac{17}{5}$ |
| N6.7 *Fractions* | N6.7 *Fractions* |
| 16) Write in lowest terms (reduce/simplify)$\frac{12}{18}$ $\frac{2}{3}$ | 17) 4.5 + 0.73 + 256.458=You may need to prompt a student to stack in an algorithm, but if you have to remind them to line up the decimal points we can conclude the student doesn’t know or has forgotten the skill. Other methods are fine |
| N6.7 *Fractions* | N 7.2 Add Decimals |
| 18) 6 – 3.682=2.318 | 19) Place the decimal where it belongs in this product$$16.324 ×3.15=51.4206$$ |
| N 7.2 Add Decimals | N 6.4*Mult and Div of decimals* |
| 20) Place the decimal where it belongs in this quotient$$42.539 ÷5.15= 8.26 $$ |
| N 6.4*Mult and Div of decimals* |
| 21) Find the product 0.891 ×16  14.256 | 22) Divide (do not leave a remainder) 24.025 ÷ 5 =4.805 |
| N 6.4, N 7.2 *Mult and Div of decimals* | N 6.4, N7.2 *Mult and Div of decimals* |
| Table  Description automatically generated23) Shade 18% of this hundredths grid | 24) What **percent** of this shape is shaded?A picture containing clipart  Description automatically generated 80% |
| N 6.5 *Percent* | N 6.5, N7.4 *Percent and Fraction* |
| 25) Express 35% as a fraction$\frac{35}{100}$ or $\frac{7}{20}$ By Gr 8 we would want our students to always reduce fractions but in this case we can accept 35/100. Math Makes Sense accepts answers like this. | 26) Write $3/100$ as a decimal. 0.03 |
| N 6.5, N7.4 *Percent and fraction* | N 7.4 Fraction and Decimal |
| 27) Write 0.72 as a percent0.72 = \_\_\_72\_\_\_% | 28) Write 0.04 as a percent0.04 = \_\_4\_\_\_\_% |
| N 7.4 *Decimal and Percent* | N 7.4 *Decimal and Percent* |
| 29) Write 0.145 as a percent0.145 = \_\_\_14.5\_\_\_% | 30) Order the following from least to greatest0.56 3 1.4 1.389 3 \_\_1.4\_\_ \_1.389\_\_ \_0.56\_\_\_\_  |
| N 7.4 *Decimal and Percent* | N 7.3 Fraction and Decimal |
| 31) Order the following from least to greatest$ 3/5$ $5/8$ $1 2/3$ $5/4$ $1$  \_\_$1 2/3$ \_\_$5/4$\_ \_ \_1\_\_\_ \_\_\_$5/8$\_\_ \_\_\_$3/5$  |
| N 7.3 Fraction and Decimal |
| 32) Place the following approximately where they belong on the number line $1/3$ 0.25 $9/10$ 1.2 $3/5$$$\frac{1}{2}$$10  In general, students should be able to approximate ¼, know that 3/5 is more than ½, know that 1/3 is bigger than 0.25, etc. They may use strategies like creating a common denominator. You can prompt them to approximate rather than drawing tic marks on their number line. They can draw tic marks if they want as long as they aren’t anxious about it.We would record if students aren’t able to have a “sense” of the number, and need to create common denominators. |
| N 7.3 Fraction and Decimal |
| 33) Add $6 \frac{2}{3}+1 \frac{5}{6}=$8 ½ | 34) Subtract $4-1 \frac{1}{5}2\frac{ 4}{5}$ |
| N7.5 *Fraction* | N7.5 *Fraction* |
| 35) Insert either **<** , **>**, or  **=** between these two integers -6 > -10 |
| N6.6 *Integers* |
| 36) Place these integers on the number line +5 -5 +2 0 -4 +4 |
| N6.6 *Integers* |
| 37) $(+8)+(-10)=$ -2 | 38) $(-12)-(+6)=$ -18 |
| N 7.6 Integers | N 7.6 Integers |
| 39) $(-17)-(-20)=$ 3 | 40) What is the ratio of cars to trucks? 4:2 or 2:1 if they simplifyThis cannot be written in fraction form as it is part:part not part:all *“4 to 2” would be acceptable but have a conversation about ratio notation* |
| N 7.6 Integers | N6.8 *Ratios* |
| 41) Solve for *n*. $$n + 6= 14$$n = 8 | 42) Solve for *x*:   $7x=35$ *x*=5 |
| P5.2 P6.2 *Equations* | P6.2*Equations* |
| 43) Solve for *t*: $3t+5=23$ *t* = 6 | 44) Solve for *x*: $\frac{x}{4}=7$ *x* = 28 |
| P 7.3 *Two Step Equation* | P 7.3  *Equation* |
| 45) Solve for *x*: $$\frac{x}{5}-3=7$$*x* = 50 | 46) Evaluate the expression  $2x-5$ when $x=3$2(3) – 5 = 1 |
| P 7.3 *Two Step Equation* | P 7.2 *Evaluate Expression* |
| 47) Write the rule with words or an equation *y*=4*x*-1 x y

|  |  |
| --- | --- |
| 1 | 3 |
| 2 | 7 |
| 3 | 11 |
| 4 | 15 |
| 5 | 19 |

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| P6.1, P7.1 *Tables and Graphs* |
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|  |  |
| --- | --- |
| Figure number | Number of Blocks |
| 1 | 2 |
| 2 | 5 |
| 3 | 8 |
| 4 | 11 |
| 5 | 14 |

48) Create a table of values for this increasing pattern Chart  Description automatically generated  Fig. 1 Fig.2 Fig. 3  |
| P6.1 *Table from pattern* |
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|  |  |
| --- | --- |
| Input | Output |
| 1 | 1 |
| 2 | 3 |
| 3 | 5 |
| 4 | 7 |
| 5 | 9 |

 49) Create an input/output table from this graph Chart  Description automatically generated |
| P6.1, P7.1 *Tables and Graphs* |
| Chart, line chart  Description automatically generated50) Graph using the table of values

|  |  |
| --- | --- |
| x | y |
| 0 | 1 |
| 3 | 4 |
| 4 | 5 |
| 7 | 8 |

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| P6.1, P7.1 *Tables and Graphs* |
| 51) Write an equation to represent the rule for this table. Use **C** for cost and **n** for number of guests.

|  |  |
| --- | --- |
| Number of Guests | Cost |
| 1 | 20 |
| 2 | 40 |
| 3 | 60 |
| 5 | 100 |
| n |  |

 | 52) Fill in the table for $$y=3x+2$$

|  |  |
| --- | --- |
| x | y |
| 1 | 5 |
| 2 | 8 |
| 3 | 11 |
| 4 | 14 |

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| P6.3 *Write an equation from a table* | P 7.1 *Create table from equation* |
| 53)Circle the angle that is about 45  |
| SS6.1 *Angles* |
| 54) Find the volume 105 cm3 |
| SS 6.2 *Volume* |
| 55) The diameter of this circle is 12cm. What is the measure of it’s radius? *r*D=12cm *r*=\_6 cm\_\_\_\_ | 56) Find the area of this triangle$A=bh/2$ or $A=1/2 bh$ 24cm26 mFor these area questions, if the student knows how to do the work but forgets units or exponents on units, have a conversation and/or allow them to add their units in, but you can mark the item correct. 8 m |
| SS7.1 *Diameter and radius* | SS7.2 *Area of triangle* |
| 57) How many minutes of homework did Ms. Smith give on Thursday?16 minutesChart, bar chart  Description automatically generated |
| SP5.2 *Double Bar Graph* |
| Chart, line chart  Description automatically generated58) About how many laptops were sold in April? 50 Laptops |
| SP 6.1 *Line graphs and data* |
| 59) There are six marbles in this bag. If you reach into the bag and pull out one marble, what is the probability you pull out a white one? $\frac{1}{6}$ |
| SP 7.3 *Probability* |