

**ST. KATHARINE DREXEL PREP MATH DEPARTMENT**  
**SUMMER MATH PACKET 2021-2022**

**THIS PACKET IS FOR STUDENTS ENTERING:**  
**8<sup>TH</sup> GRADE MATH**



**DIRECTIONS: IN ORDER TO RECEIVE MAXIMUM CREDIT:**

- **ALL PROBLEMS MUST BE COMPLETED.**
- **ALL WORK MUST BE SHOWN ON LOOSE LEAF PAPER AND MUST BE COMPLETED WITH A PENCIL ONLY. PAPERS WILL NOT BE GRADED IF THE WORK IS DONE WITH AN INK PEN.**
- **YOU MAY USE MATH WEBSITES SUCH AS KHAN ACADEMY FOR ASSISTANCE.**

**DUE DATE: THE SUMMER MATH PACKET MUST BE SUBMITTED THE FIRST WEEK OF SCHOOL FOR A HOMEWORK GRADE. YOUR MATH TEACHER WILL SELECT PROBLEMS FROM THE MATH PACKET TO CREATE YOUR FIRST QUIZ IN YOUR MATH COURSE.**



- \_\_\_ 12.  $\begin{array}{r} 33 \\ \times 39 \\ \hline \end{array}$
- a. 495                      b. 1,454                      c. 396                      d. 1,287
- \_\_\_ 13.  $\begin{array}{r} 350 \\ \times 37 \\ \hline \end{array}$
- a. 12,950                      b. 12,821                      c. 3,500                      d. 4,305
- \_\_\_ 14.  $0.93 \times 0.5 =$
- a. 4.88                      b. 0.465                      c. 0.488                      d. 4.65
- \_\_\_ 15.  $4.1 \times 5.6 =$
- a. 45.1                      b. 22.96                      c. 2.3                      d. 4.51
- \_\_\_ 16.  $0.01 \times 0.24 =$
- a. 0.0024                      b. 0.24                      c. 0.024                      d. 0.00024
- \_\_\_ 17.  $0.9 \times 0.062 =$
- a. 0.0558                      b. 0.558                      c. 0.00558                      d. 5.58
- \_\_\_ 18.  $0.047 \times 0.051 =$
- a. 0.2397                      b. 0.02397                      c. 0.002397                      d. 0.0002397
- \_\_\_ 19.  $3.5 \times 100 =$
- a. 350                      b. 35                      c. 3,500                      d. 35,000
- \_\_\_ 20.  $\frac{1}{6} \times \frac{7}{9} =$
- a.  $\frac{3}{14}$                       b.  $\frac{7}{54}$                       c.  $\frac{7}{9}$                       d.  $1\frac{1}{6}$
- \_\_\_ 21.  $2\frac{1}{6} \times 3\frac{2}{5} =$
- a.  $7\frac{11}{30}$                       b.  $6\frac{1}{10}$                       c.  $5\frac{23}{30}$                       d.  $6\frac{1}{15}$

**Divide.**

- \_\_\_ 22.  $7 \overline{)539}$
- a. 75                      b. 81                      c. 77                      d. 79
- \_\_\_ 23.  $4 \overline{)67}$
- a. 14                      b. 16 R3                      c. 14 R5                      d. 16 R5
- \_\_\_ 24.  $9 \overline{)444}$
- a. 49 R3                      b. 52 R5                      c. 49 R5                      d. 52
- \_\_\_ 25.  $14 \overline{)68}$
- a. 4 R12                      b. 7 R14                      c. 7                      d. 4 R14
- \_\_\_ 26.  $33 \overline{)236}$
- a. 7 R7                      b. 10 R7                      c. 10                      d. 7 R5



- \_\_\_ 43.  $9 - 5.478$   
 a. 3.52                      b. 3522                      c. 4.521                      d. 3.522
- \_\_\_ 44.  $4.4 - 2.78$   
 a. 1.71                      b. 1.62                      c. 162                      d. 1.6
- \_\_\_ 45.  $3.095 + 6.3 + 0.21$   
 a. 9.605                      b. 9.395                      c. 9.185                      d. 9.61
- \_\_\_ 46.  $\frac{6}{12} + \frac{8}{12} =$   
 a.  $1\frac{1}{6}$                       b. 4                      c. 2                      d.  $1\frac{7}{12}$
- \_\_\_ 47.  $\frac{9}{10} - \frac{2}{10} =$   
 a.  $1\frac{1}{10}$                       b.  $1\frac{7}{10}$                       c.  $1\frac{11}{20}$                       d.  $1\frac{7}{20}$
- \_\_\_ 48.  $6\frac{4}{12} + 2\frac{2}{12}$   
 a.  $2\frac{1}{3}$                       b.  $8\frac{1}{4}$                       c.  $6\frac{1}{2}$                       d.  $8\frac{1}{2}$
- \_\_\_ 49.  $8\frac{9}{10} - 1\frac{4}{10}$   
 a. 7                      b.  $6\frac{4}{5}$                       c.  $7\frac{1}{2}$                       d.  $87\frac{1}{2}$

**Find the missing number.**

- \_\_\_ 50.  $\frac{10}{15} = \frac{?}{60}$   
 a. 55                      b. 30                      c. 40                      d. 50
- \_\_\_ 51. Write  $\frac{66}{72}$  in simplest form.  
 a.  $\frac{33}{36}$                       b.  $\frac{11}{36}$                       c.  $\frac{33}{12}$                       d.  $\frac{11}{12}$
- \_\_\_ 52. Write  $\frac{19}{16}$  as a mixed number.  
 a.  $3\frac{16}{19}$                       b.  $1\frac{3}{16}$                       c.  $5\frac{1}{3}$                       d.  $1\frac{3}{16}$
- \_\_\_ 53. Write  $2\frac{1}{11}$  as an improper fraction.  
 a.  $\frac{22}{11}$                       b.  $\frac{23}{11}$                       c.  $\frac{11}{3}$                       d.  $\frac{3}{11}$

**Find each sum or difference. Round to the place value of the less precise measurement.**

- \_\_\_ 54.  $2 \text{ m} + 4.9 \text{ m}$

- a. 7 m                      b. 10 m                      c. 6.9 m                      d. 2.9 m
- \_\_\_ 55.  $7 \text{ cm} - 4.4 \text{ cm}$   
 a. 11 cm                      b. 10 cm                      c. 3 cm                      d. 2.6 cm
- \_\_\_ 56.  $2.13 \text{ m} + 8.6 \text{ m}$   
 a. 6.47 m                      b. 10.73 m                      c. 11 m                      d. 10.7 m
- \_\_\_ 57.  $7.79 \text{ km} - 2.1 \text{ km}$   
 a. 5.69 km                      b. 6 km                      c. 9.9 km                      d. 5.7 km

**Find each product or quotient. Use significant digits.**

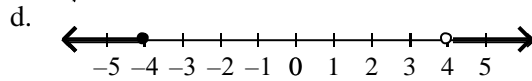
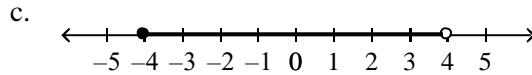
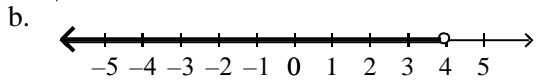
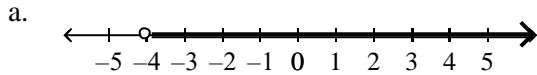
- \_\_\_ 58.  $11 \text{ ft} \times 825 \text{ ft}$   
 a.  $9,080 \text{ ft}^2$                       b.  $9,100 \text{ ft}^2$                       c.  $9,000 \text{ ft}^2$                       d.  $9,075 \text{ ft}^2$
- \_\_\_ 59.  $1,370 \text{ m} \div 31.7 \text{ s}$   
 a.  $43 \text{ m/s}$                       b.  $43.218 \text{ m/s}$                       c.  $43.22 \text{ m/s}$                       d.  $43.2 \text{ m/s}$
- \_\_\_ 60.  $0.0505 \text{ m} \times 665 \text{ m}$   
 a.  $33.6 \text{ m}^2$                       b.  $33.58 \text{ m}^2$                       c.  $33.50 \text{ m}^2$                       d.  $33.582 \text{ m}^2$

**Complete the equation. Round to the nearest hundredth where necessary.**

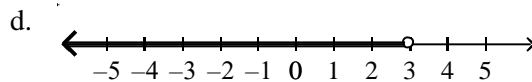
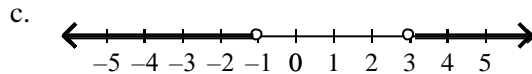
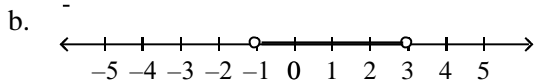
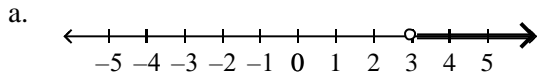
- \_\_\_ 61.  $145 \text{ g} \approx \square \text{ oz}$   
 a. 4,118.00                      b. 0.20                      c. 5.11                      d. 368.30
- \_\_\_ 62.  $19 \text{ in.} = \square \text{ cm}$   
 a. 11.80                      b. 48.26                      c. 41.80                      d. 7.48
- \_\_\_ 63.  $5 \text{ L} \approx \square \text{ qt}$   
 a. 8.00                      b. 5.30                      c. 4.72                      d. 3.13
- \_\_\_ 64.  $10 \text{ mi} \approx \square \text{ km}$   
 a. 6.21                      b. 9.43                      c. 10.60                      d. 16.10
- \_\_\_ 65.  $52 \text{ lb} \approx \square \text{ kg}$   
 a. 23.64                      b. 83.20                      c. 114.40                      d. 20.47
- \_\_\_ 66. The instructions for building a kite tell you to begin by cutting a strip of wood to 45 cm in length, but your ruler only measures inches. How many inches should the piece of wood be? Round to the nearest quarter of an inch.  
 a.  $17\frac{3}{4} \text{ in.}$                       b.  $114\frac{3}{4} \text{ in.}$                       c.  $113\frac{3}{4} \text{ in.}$                       d.  $16\frac{3}{4} \text{ in.}$

**Graph the compound inequality on a number line.**

67.  $-4 \leq x$  and  $x < 4$

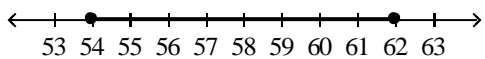


68.  $x < -1$  or  $x > 3$

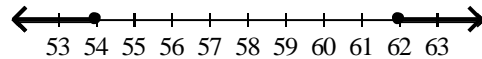


69. The holes drilled in a sheet of metal must have a diameter of at least 54 mm and no more than 62 mm. Write the diameter as a compound inequality and graph the solution.

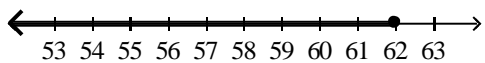
a.  $54 \leq d \leq 62$



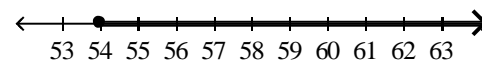
c.  $54 \geq d \geq 62$



b.  $d \geq 54$  or  $d \leq 62$



d.  $d \geq 54$  or  $d \geq 62$



70. A new television weighs 80 lb, or 36.36 kg. Write a direct variation for the relationship between pounds and kilograms. (Use  $y$  to represent pounds and  $x$  to represent kilograms.) Find the number of kilograms in 85 lb.

a.  $y = 0.45x$ ; 0.03 kg

c.  $y = 0.45x$ ; 112.82 kg

b.  $y = 2.20x$ ; 38.64 kg

d.  $y = 2.20x$ ; 187.00 kg

71. Find the sum of the measures of the angles in a pentagon.

a.  $360^\circ$

b.  $540^\circ$

c.  $620^\circ$

d.  $900^\circ$

72. Find the sum of the measures of the angles in a nonagon (9 sides).

a.  $620^\circ$

b.  $900^\circ$

c.  $1260^\circ$

d.  $1620^\circ$

**Simplify the polynomial.**

73.  $-3 + 5x + 6x^2 + 4 - 3x - x^2$

a.  $5x^2 + 1$

c.  $5x^2 + 6x + 4$

b.  $5x^2 + 2x + 1$

d.  $5x^2 + 2y - 3$

74.  $-5y^3 - 7y^2 + 5 - 2y^3 + y + 6$

a.  $-7y^3 + 11y^2 - 7y$

c.  $-7y^3 - 7y^2 + y + 11$

b.  $-3y^3 - 7y^2 + y + 11$

d.  $-3y^3 + y^2 - 7y + 11$