Note: Scholars are allowed to use this conversion chart on the STAAR test

STAAR GRADE 5 MATHEMATICS REFERENCE MATERIALS

LENGTH

Customary	Metric
1 mile (mi) = 1,760 yards (yd)	1 kilometer (km) = 1,000 meters (m)
1 yard (yd) = 3 feet (ft)	1 meter (m) = 100 centimeters (cm)
1 foot (ft) = 12 inches (in.)	1 centimeter (cm) = 10 millimeters (mm)

VOLUME AND CAPACITY

Customary	Metric
1 gallon (gal) = 4 quarts (qt)	1 liter (L) = 1,000 milliliters (mL)
1 quart (qt) = 2 pints (pt)	
1 pint (pt) = 2 cups (c)	
1 cup (c) = 8 fluid ounces (fl oz)	

WEIGHT AND MASS

Customary	Metric
1 ton (T) = 2,000 pounds (lb)	1 kilogram (kg) = 1,000 grams (g)
1 pound (lb) = 16 ounces (oz)	1 gram (g) = 1,000 milligrams (mg)

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1 ton (T) = 2,000 pounds (lb)	1 kilogram (kg) = 1,000 grams (g)
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1. Convert 3 miles to yards.

2. Convert 29 feet to inches.

3. Convert 56 fluid ounces to cups.

4. Convert 210 feet to yards.

5. Convert 5 tons to pounds.

6. Convert 64 pints to gallons.

Unit: 5th – Measurement & Data Analysis
Lesson: 5.7.A – Measurement: Customary Conversions
Problem Set 1

Tip: Bigger → Smaller = Multiply; Smaller → Bigger = Divide

1	2	3	4	5	6
3 miles X 1,760 yards per mile = 5,280 yards	29 ft X 12 ins per ft = 348 ins	56 fl ozs ÷ 8 ozs per cup = 7 cups	210 ft ÷ 3 ft per yrd = 70 yrds	5 tons X 2, 000 lbs per ton = 10,000 lbs	64 pts ÷ 2 pts per qt = 32 qts 32 qts ÷ 4 qts per gal = 8 gals
7	**8**	**9**	**10**	**11**	**12**
125 yds X 3 ft per yrd = 375 feet	240 ins ÷ 12 in per ft = 20 ft	80 gals X 4 qts per gal = 320 qts	66 pts ÷ 2 pts per qt = 33 qts	5 lbs X 16 ozs per lb = 80 ozs	72 cups ÷ 2 cups per pt = 36 pts 36 pts ÷ 2 pts per qt = 18 qts
13	**14**	**15**	**16**	**17**	**18**
5 yrds X 3 ft per yrd = 15 ft 15 ft X 12 in per ft = 180 ins	150 pts X 2 cups per pt = 300 cups	10 tons X 2,000 lbs per ton = 20,000 lbs	84 ins ÷ 12 in per ft = 7 ft	32 qts ÷ 4 qts per gal = 8 gals	80 pts ÷ 2 pts per qt = 40 qts
19	**20**	**21**	**22**	**23**	**24**
11 ft X 12 ins per ft = 132 ins	6 yrds X 3 ft per yrd = 18 ft 18 ft X 12 ins per ft = 216 ins	24 fl ozs ÷ 8 ozs per cup = 3 cups	160 fl ozs ÷ 8 ozs per cup = 20 cups 20 cups ÷ 2 cups per pt = 10 pts	99 ft ÷ 3 ft per yrd = 33 yds	200 yrds X 3 ft per yrd = 600 ft
25	**26**	**27**	**28**	**29**	**30**
28 cups ÷ 2 cups per pt = 14 pts 14 pts ÷ 2 pts per qt = 7 qts	32 pts ÷ 2 pts per qt = 16 qts 16 qts ÷ 4 qts per gal = 4 gals	15 gals X 4 qts per gal = 60 qts	100 yds X 3 ft per yrd = 300 ft 300ft X 12 in per ft = 3,600 ins	2 miles X 1,760 yrds per mile = 3,520 yrds	27 ft ÷ 3 ft per yrd = 9 yrds

7. Convert 125 yards to feet.

8. Convert 240 inches to feet.

9. Convert 80 gallons to quarts.

10. Convert 66 pints to quarts.

11. Convert 5 pounds to ounces.

12. Convert 72 cups to quarts.

Tip: Bigger → Smaller = Multiply; Smaller → Bigger = Divide

1 3 miles X 1,760 yards per mile = 5,280 yards	**2** 29 ft X 12 ins per ft = 348 ins	**3** 56 fl ozs ÷ 8 ozs per cup = 7 cups	**4** 210 ft ÷ 3 ft per yrd = 70 yrds	**5** 5 tons X 2, 000 lbs per ton = 10,000 lbs	**6** 64 pts ÷ 2 pts per qt = 32 qts 32 qts ÷ 4 qts per gal = 8 gals
7 125 yds X 3 ft per yrd = 375 feet	**8** 240 ins ÷ 12 in per ft = 20 ft	**9** 80 gals X 4 qts per gal = 320 qts	**10** 66 pts ÷ 2 pts per qt = 33 qts	**11** 5 lbs X 16 ozs per lb = 80 ozs	**12** 72 cups ÷ 2 cups per pt = 36 pts 36 pts ÷ 2 pts per qt = 18 qts
13 5 yrds X 3 ft per yrd = 15 ft 15 ft X 12 in per ft = 180 ins	**14** 150 pts X 2 cups per pt = 300 cups	**15** 10 tons X 2,000 lbs per ton = 20,000 lbs	**16** 84 ins ÷ 12 in per ft = 7 ft	**17** 32 qts ÷ 4 qts per gal = 8 gals	**18** 80 pts ÷ 2 pts per qt = 40 qts
19 11 ft X 12 ins per ft = 132 ins	**20** 6 yrds X 3 ft per yrd = 18 ft 18 ft X 12 ins per ft = 216 ins	**21** 24 fl ozs ÷ 8 ozs per cup = 3 cups	**22** 160 fl ozs ÷ 8 ozs per cup = 20 cups 20 cups ÷ 2 cups per pt = 10 pts	**23** 99 ft ÷ 3 ft per yrd = 33 yds	**24** 200 yrds X 3 ft per yrd = 600 ft
25 28 cups ÷ 2 cups per pt = 14 pts 14 pts ÷ 2 pts per qt = 7 qts	**26** 32 pts ÷ 2 pts per qt = 16 qts 16 qts ÷ 4 qts per gal = 4 gals	**27** 15 gals X 4 qts per gal = 60 qts	**28** 100 yds X 3 ft per yrd = 300 ft 300ft X 12 in per ft = 3,600 ins	**29** 2 miles X 1,760 yrds per mile = 3,520 yrds	**30** 27 ft ÷ 3 ft per yrd = 9 yrds

13. Convert 5 yards to inches.

14. Convert 150 pints to cups.

15. Convert 10 tons to pounds.

16. Convert 84 inches to feet.

17. Convert 32 quarts to gallons.

18. Convert 80 pints to quarts.

Unit: 5th – Measurement & Data Analysis
Lesson: 5.7.A – Measurement: Customary Conversions
Problem Set 3

Tip: Bigger → Smaller = Multiply; Smaller → Bigger = Divide

1 3 miles X 1,760 yards per mile = 5,280 yards	**2** 29 ft X 12 ins per ft = 348 ins	**3** 56 fl ozs ÷ 8 ozs per cup = 7 cups	**4** 210 ft ÷ 3 ft per yrd = 70 yrds	**5** 5 tons X 2, 000 lbs per ton = 10,000 lbs	**6** 64 pts ÷ 2 pts per qt = 32 qts 32 qts ÷ 4 qts per gal = 8 gals
7 125 yds X 3 ft per yrd = 375 feet	**8** 240 ins ÷ 12 in per ft = 20 ft	**9** 80 gals X 4 qts per gal = 320 qts	**10** 66 pts ÷ 2 pts per qt = 33 qts	**11** 5 lbs X 16 ozs per lb = 80 ozs	**12** 72 cups ÷ 2 cups per pt = 36 pts 36 pts ÷ 2 pts per qt = 18 qts
13 5 yrds X 3 ft per yrd = 15 ft 15 ft X 12 in per ft = 180 ins	**14** 150 pts X 2 cups per pt = 300 cups	**15** 10 tons X 2,000 lbs per ton = 20,000 lbs	**16** 84 ins ÷ 12 in per ft = 7 ft	**17** 32 qts ÷ 4 qts per gal = 8 gals	**18** 80 pts ÷ 2 pts per qt = 40 qts
19 11 ft X 12 ins per ft = 132 ins	**20** 6 yrds X 3 ft per yrd = 18 ft 18 ft X 12 ins per ft = 216 ins	**21** 24 fl ozs ÷ 8 ozs per cup = 3 cups	**22** 160 fl ozs ÷ 8 ozs per cup = 20 cups 20 cups ÷ 2 cups per pt = 10 pts	**23** 99 ft ÷ 3 ft per yrd = 33 yds	**24** 200 yrds X 3 ft per yrd = 600 ft
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19. Convert 11 feet to inches.

20. Convert 6 yards to inches.

21. Convert 24 fluid ounces to cups.

22. Convert 160 fluid ounces to pints.

23. Convert 99 feet to yards.

24. Convert 200 yards to feet.

Unit: 5th – Measurement & Data Analysis
Lesson: 5.7.A – Measurement: Customary Conversions
Problem Set 4

Tip: Bigger → Smaller = Multiply; Smaller → Bigger = Divide

1 3 miles X 1,760 yards per mile = 5,280 yards	**2** 29 ft X 12 ins per ft = 348 ins	**3** 56 fl ozs ÷ 8 ozs per cup = 7 cups	**4** 210 ft ÷ 3 ft per yrd = 70 yrds	**5** 5 tons X 2,000 lbs per ton = 10,000 lbs	**6** 64 pts ÷ 2 pts per qt = 32 qts 32 qts ÷ 4 qts per gal = 8 gals
7 125 yds X 3 ft per yrd = 375 feet	**8** 240 ins ÷ 12 in per ft = 20 ft	**9** 80 gals X 4 qts per gal = 320 qts	**10** 66 pts ÷ 2 pts per qt = 33 qts	**11** 5 lbs X 16 ozs per lb = 80 ozs	**12** 72 cups ÷ 2 cups per pt = 36 pts 36 pts ÷ 2 pts per qt = 18 qts
13 5 yrds X 3 ft per yrd = 15 ft 15 ft X 12 in per ft = 180 ins	**14** 150 pts X 2 cups per pt = 300 cups	**15** 10 tons X 2,000 lbs per ton = 20,000 lbs	**16** 84 ins ÷ 12 in per ft = 7 ft	**17** 32 qts ÷ 4 qts per gal = 8 gals	**18** 80 pts ÷ 2 pts per qt = 40 qts
19 11 ft X 12 ins per ft = 132 ins	**20** 6 yrds X 3 ft per yrd = 18 ft 18 ft X 12 ins per ft = 216 ins	**21** 24 fl ozs ÷ 8 ozs per cup = 3 cups	**22** 160 fl ozs ÷ 8 ozs per cup = 20 cups 20 cups ÷ 2 cups per pt = 10 pts	**23** 99 ft ÷ 3 ft per yrd = 33 yds	**24** 200 yrds X 3 ft per yrd = 600 ft
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25. Convert 28 cups to quarts.

26. Convert 32 pints to gallons.

27. Convert 15 gallons to quarts.

28. Convert 100 yards to inches.

29. Convert 2 miles to yards.

30. Convert 27 feet to yards.

Unit: 5th – Measurement & Data Analysis
Lesson: 5.7.A – Measurement: Customary Conversions
Problem Set 5

Tip: Bigger → Smaller = Multiply; Smaller → Bigger = Divide

1 3 miles X 1,760 yards per mile = 5,280 yards	**2** 29 ft X 12 ins per ft = 348 ins	**3** 56 fl ozs ÷ 8 ozs per cup = 7 cups	**4** 210 ft ÷ 3 ft per yrd = 70 yrds	**5** 5 tons X 2,000 lbs per ton = 10,000 lbs	**6** 64 pts ÷ 2 pts per qt = 32 qts 32 qts ÷ 4 qts per gal = 8 gals
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