



ENTREPRENEUR Fair (PART 5-GROUP)

Please read through the following directions for each part carefully. You may not move on to the next step until you have had the teacher's approval and signature.



1. PRODUCTION RATES

2. COMMISSION

3. UNSOLD INVENTORY





PRODUCTION RATES

EXAMPLE

IF YOU CAN MAKE 13 PRODUCTS IN 2 HOURS,
HOW MANY PRODUCTS CAN YOU MAKE IN 45
MINUTES?



STEP 1: SET UP EQUIVALENT PROPORTIONS.

$$\frac{13 \text{ PRODUCTS}}{120 \text{ MINUTES}} = \frac{X}{45 \text{ MINUTES}}$$

STEP 2: CROSS-MULTIPLY THE OPPOSITE UNITS.

$$\frac{13 \text{ PRODUCTS}}{120 \text{ MINUTES}} = \frac{X}{45 \text{ MINUTES}}$$

STEP 3: WRITE IT OUT ALGEBRAICALLY

$$13 \cdot 45 = 120 \cdot X$$

STEP 4: MULTIPLY EACH SIDE OF THE EQUATION.

$$585 = 120X$$

STEP 5: DIVIDE EACH SIDE OF THE EQUATION BY THE COEFFICIENT (THE CONSTANT MULTIPLIED BY THE VARIABLE).

$$585 \div 120 = 120X \div 120$$

STEP 6: SHOW FINAL ANSWER WITH UNITS (ROUNDED TO THE NEAREST HUNDREDTH).

4.88 PRODUCTS IN 45 MINUTES

INVESTOR APPROVAL _____



PRODUCTION RATES

BUSINESS PARTNER #1



IT TAKES 3 HOURS TO MAKE 18 OF PRODUCT #1.
HOW MANY OF PRODUCT #1 CAN BE MADE IN 5 HOURS?

STEP 1: SET UP EQUIVALENT PROPORTIONS.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 2: CROSS-MULTIPLY THE OPPOSITE UNITS.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 3: WRITE IT OUT ALGEBRAICALLY

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 4: MULTIPLY EACH SIDE OF THE EQUATION.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 5: DIVIDE EACH SIDE OF THE EQUATION BY THE COEFFICIENT (THE CONSTANT MULTIPLIED BY THE VARIABLE).

$$\frac{\quad}{\quad} \div \frac{\quad}{\quad} = \frac{\quad}{\quad} \div \frac{\quad}{\quad}$$

STEP 6: SHOW FINAL ANSWER WITH UNITS (ROUNDED TO THE NEAREST HUNDREDTH).

INVESTOR APPROVAL _____



PRODUCTION RATES

BUSINESS PARTNER #1



YOUR BUSINESS PRODUCES 120 ITEMS OF PRODUCT #2 IN 6 HOURS. HOW LONG WILL IT TAKE TO PRODUCE 200 ITEMS OF PRODUCT #2?

STEP 1: SET UP EQUIVALENT PROPORTIONS.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 2: CROSS-MULTIPLY THE OPPOSITE UNITS.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 3: WRITE IT OUT ALGEBRAICALLY

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 4: MULTIPLY EACH SIDE OF THE EQUATION.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 5: DIVIDE EACH SIDE OF THE EQUATION BY THE COEFFICIENT (THE CONSTANT MULTIPLIED BY THE VARIABLE).

$$\frac{\quad}{\quad} \div \frac{\quad}{\quad} = \frac{\quad}{\quad} \div \frac{\quad}{\quad}$$

STEP 6: SHOW FINAL ANSWER WITH UNITS (ROUNDED TO THE NEAREST HUNDREDTH).

INVESTOR APPROVAL _____



PRODUCTION RATES

BUSINESS PARTNER #1



YOUR COMPANY PRODUCES 96 ITEMS OF PRODUCT #3 IN 8 HOURS. HOW MANY ITEMS OF PRODUCT #2 CAN YOU PRODUCE IN 14 HOURS?

STEP 1: SET UP EQUIVALENT PROPORTIONS.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 2: CROSS-MULTIPLY THE OPPOSITE UNITS.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 3: WRITE IT OUT ALGEBRAICALLY

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 4: MULTIPLY EACH SIDE OF THE EQUATION.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 5: DIVIDE EACH SIDE OF THE EQUATION BY THE COEFFICIENT (THE CONSTANT MULTIPLIED BY THE VARIABLE).

$$\frac{\quad}{\quad} \div \frac{\quad}{\quad} = \frac{\quad}{\quad} \div \frac{\quad}{\quad}$$

STEP 6: SHOW FINAL ANSWER WITH UNITS (ROUNDED TO THE NEAREST HUNDREDTH).

$$\frac{\quad}{\quad}$$

INVESTOR APPROVAL _____



PRODUCTION RATES

BUSINESS PARTNER #2



YOUR COMPANY PRODUCES 72 ITEMS OF
PRODUCT #1 IN 6 HOURS. HOW MANY ITEMS OF
PRODUCT #1 CAN YOU PRODUCE IN 11 HOURS?

STEP 1: SET UP EQUIVALENT PROPORTIONS.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 2: CROSS-MULTIPLY THE OPPOSITE UNITS.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 3: WRITE IT OUT ALGEBRAICALLY

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 4: MULTIPLY EACH SIDE OF THE EQUATION.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 5: DIVIDE EACH SIDE OF THE EQUATION BY THE COEFFICIENT (THE CONSTANT MULTIPLIED BY THE VARIABLE).

$$\frac{\quad}{\quad} \div \frac{\quad}{\quad} = \frac{\quad}{\quad} \div \frac{\quad}{\quad}$$

STEP 6: SHOW FINAL ANSWER WITH UNITS (ROUNDED TO THE NEAREST HUNDREDTH).

INVESTOR APPROVAL _____



PRODUCTION RATES

BUSINESS PARTNER #2



YOUR COMPANY CAN CREATE 30 ITEMS OF
PRODUCT #2 IN 4 HOURS. HOW MANY HOURS
WILL IT TAKE TO CREATE 120 ITEMS?

STEP 1: SET UP EQUIVALENT PROPORTIONS.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 2: CROSS-MULTIPLY THE OPPOSITE UNITS.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 3: WRITE IT OUT ALGEBRAICALLY

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 4: MULTIPLY EACH SIDE OF THE EQUATION.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 5: DIVIDE EACH SIDE OF THE EQUATION BY THE COEFFICIENT (THE CONSTANT MULTIPLIED BY THE VARIABLE).

$$\frac{\quad}{\quad} \div \frac{\quad}{\quad} = \frac{\quad}{\quad} \div \frac{\quad}{\quad}$$

STEP 6: SHOW FINAL ANSWER WITH UNITS (ROUNDED TO THE NEAREST HUNDREDTH).

INVESTOR APPROVAL _____



PRODUCTION RATES

BUSINESS PARTNER #2



YOUR COMPANY MAKES 250 ITEMS OF PRODUCT #3 IN 5 HOURS. HOW MANY ITEMS OF PRODUCT #3 CAN YOU MAKE IN 8 HOURS?

STEP 1: SET UP EQUIVALENT PROPORTIONS.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 2: CROSS-MULTIPLY THE OPPOSITE UNITS.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 3: WRITE IT OUT ALGEBRAICALLY

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 4: MULTIPLY EACH SIDE OF THE EQUATION.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 5: DIVIDE EACH SIDE OF THE EQUATION BY THE COEFFICIENT (THE CONSTANT MULTIPLIED BY THE VARIABLE).

$$\frac{\quad}{\quad} \div \frac{\quad}{\quad} = \frac{\quad}{\quad} \div \frac{\quad}{\quad}$$

STEP 6: SHOW FINAL ANSWER WITH UNITS (ROUNDED TO THE NEAREST HUNDREDTH).

$$\frac{\quad}{\quad}$$

INVESTOR APPROVAL _____



PRODUCTION RATES

BUSINESS PARTNER #2



YOUR COMPANY MAKES 250 ITEMS OF PRODUCT #3 IN 5 HOURS. HOW MANY ITEMS OF PRODUCT #3 CAN YOU MAKE IN 8 HOURS?

STEP 1: SET UP EQUIVALENT PROPORTIONS.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 2: CROSS-MULTIPLY THE OPPOSITE UNITS.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 3: WRITE IT OUT ALGEBRAICALLY

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 4: MULTIPLY EACH SIDE OF THE EQUATION.

$$\frac{\quad}{\quad} = \frac{\quad}{\quad}$$

STEP 5: DIVIDE EACH SIDE OF THE EQUATION BY THE COEFFICIENT (THE CONSTANT MULTIPLIED BY THE VARIABLE).

$$\frac{\quad}{\quad} \div \frac{\quad}{\quad} = \frac{\quad}{\quad} \div \frac{\quad}{\quad}$$

STEP 6: SHOW FINAL ANSWER WITH UNITS (ROUNDED TO THE NEAREST HUNDREDTH).

$$\frac{\quad}{\quad}$$

INVESTOR APPROVAL _____



COMMISSION

BUSINESS PARTNER #1



YOUR BUSINESS EARNS \$235 IN ONE DAY. YOU DONATE 15% TO CHARITY, AND YOU GIVE ANOTHER 20% TO YOUR BUSINESS PARTNER.

STEP 1: CALCULATE THE TOTAL PERCENT THAT IS GIVEN AWAY.

_____ % + _____ % = _____ %

STEP 2: CALCULATE THE PERCENT THAT YOU TAKE HOME.

100% - _____ = _____ % (KEEP)

STEP 3: USE WHATEVER STRATEGY YOU LIKE TO FIND OUT HOW MUCH MONEY YOU TAKE HOME.

_____ % OF \$235 = \$ _____

YOUR BUSINESS EARNS \$320 IN ONE DAY. YOU DONATE 12% TO CHARITY, AND YOU GIVE ANOTHER 18% TO YOUR BUSINESS PARTNER.

STEP 1: CALCULATE THE TOTAL PERCENT THAT IS GIVEN AWAY.

_____ % + _____ % = _____ %

STEP 2: CALCULATE THE PERCENT THAT YOU TAKE HOME.

100% - _____ = _____ % (KEEP)

STEP 3: USE WHATEVER STRATEGY YOU LIKE TO FIND OUT HOW MUCH MONEY YOU TAKE HOME.

_____ % OF \$320 = \$ _____

INVESTOR APPROVAL _____



COMMISSION

BUSINESS PARTNER #2



YOUR BUSINESS EARNS \$450 IN ONE DAY. YOU DONATE 8% TO CHARITY, AND YOU GIVE ANOTHER 17% TO YOUR BUSINESS PARTNER.

STEP 1: CALCULATE THE TOTAL PERCENT THAT IS GIVEN AWAY.

_____ % + _____ % = _____ %

STEP 2: CALCULATE THE PERCENT THAT YOU TAKE HOME.

100% - _____ = _____ % (KEEP)

STEP 3: USE WHATEVER STRATEGY YOU LIKE TO FIND OUT HOW MUCH MONEY YOU TAKE HOME.

_____ % OF \$450 = \$ _____

YOUR BUSINESS EARNS \$525 IN ONE DAY. YOU DONATE 10% TO CHARITY, AND YOU GIVE ANOTHER 25% TO YOUR BUSINESS PARTNER.

STEP 1: CALCULATE THE TOTAL PERCENT THAT IS GIVEN AWAY.

_____ % + _____ % = _____ %

STEP 2: CALCULATE THE PERCENT THAT YOU TAKE HOME.

100% - _____ = _____ % (KEEP)

STEP 3: USE WHATEVER STRATEGY YOU LIKE TO FIND OUT HOW MUCH MONEY YOU TAKE HOME.

_____ % OF 525 = \$ _____

INVESTOR APPROVAL _____



UNSOLD INVENTORY

BUSINESS PARTNER #1



YOU MADE 120 ITEMS. 25% DID NOT SELL. WHAT IS THE RATIO OF SOLD TO UNSOLD ITEMS?

UNSOLD ITEMS: 25% OF 120= _____

SOLD ITEMS: 120- _____ = _____

RATIO OF SOLD TO UNSOLD ITEMS _____ (IN SIMPLEST TERMS)

FOR EVERY 1 UNSOLD ITEM, HOW MANY ITEMS WERE SOLD?

_____ SOLD ITEMS FOR EVERY 1 UNSOLD ITEMS

YOU MADE 305 ITEMS. 25.5% DID NOT SELL. WHAT IS THE RATIO OF SOLD TO UNSOLD ITEMS?

UNSOLD ITEMS: 25.5% OF 305= _____

SOLD ITEMS: 305 - _____ = _____ (ROUND TO THE NEAREST HUNDREDTH)

RATIO OF SOLD TO UNSOLD ITEMS _____ (IN SIMPLEST TERMS AND ROUND TO THE NEAREST HUNDREDTH)

_____ SOLD ITEMS FOR EVERY 1 UNSOLD ITEMS

INVESTOR APPROVAL _____



UNSOLD INVENTORY

BUSINESS PARTNER #2



YOU MADE 200 ITEMS. 15% DID NOT SELL. WHAT IS THE RATIO OF SOLD TO UNSOLD ITEMS?

UNSOLD ITEMS: 15% OF 200= _____

SOLD ITEMS: 200 - _____ = _____

RATIO OF SOLD TO UNSOLD ITEMS _____ (IN SIMPLEST TERMS)

FOR EVERY 1 UNSOLD ITEM, HOW MANY ITEMS WERE SOLD?

_____ SOLD ITEMS FOR EVERY 1 UNSOLD ITEMS

YOU MADE 240 ITEMS. 12.5% DID NOT SELL. WHAT IS THE RATIO OF SOLD TO UNSOLD ITEMS?

UNSOLD ITEMS: 12.5% OF 240= _____

SOLD ITEMS: 240 - _____ = _____

RATIO OF SOLD TO UNSOLD ITEMS _____ (IN SIMPLEST TERMS)

_____ SOLD ITEMS FOR EVERY 1 UNSOLD ITEMS

INVESTOR APPROVAL _____